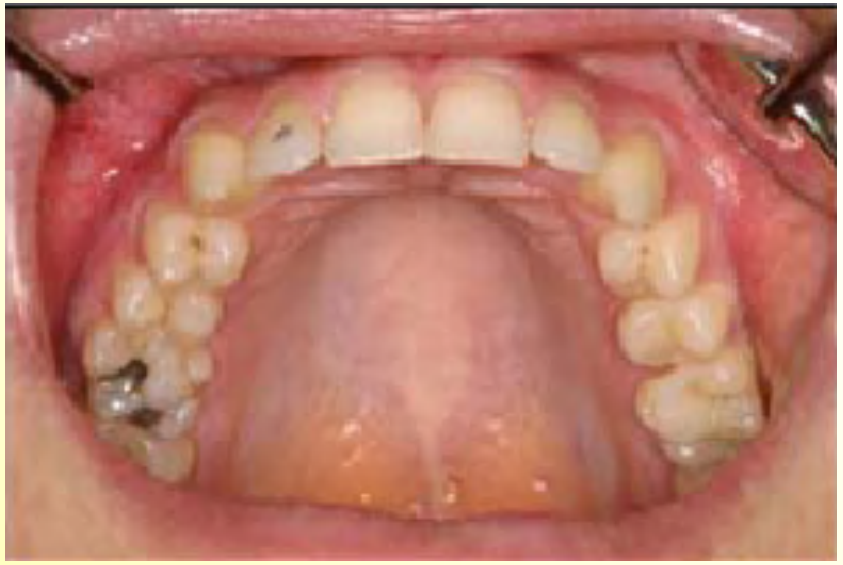
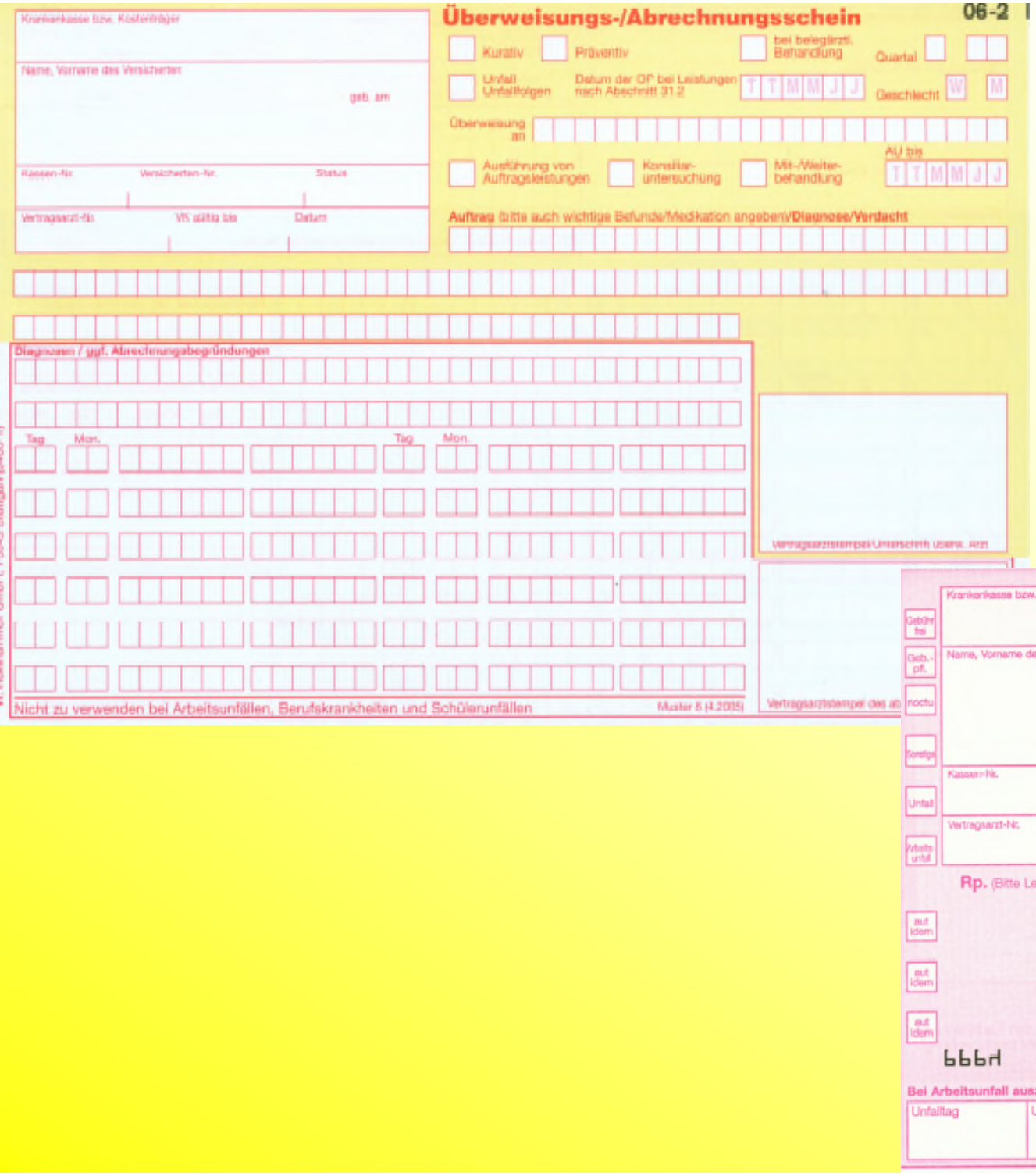


Praxis für Pathologie

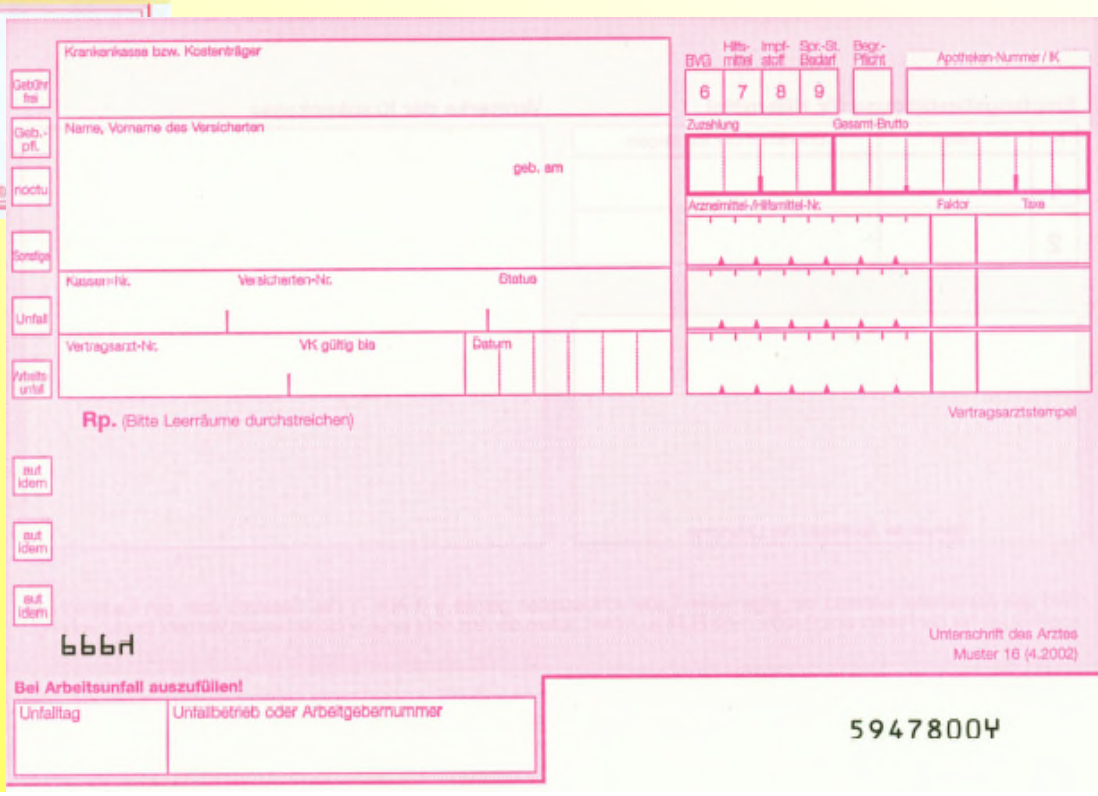
Dr. med. Simon Savin
Ludwig Erhard Allee24
Tel. 0721.3548880
www.pathologie-savin.de

Überblick über Zahnzysten und benigne Knochentumoren



Für die Pathologie

Überweisungsschein



Name, Vorname des Versicherten geb.
Kassen-Nr. Versicherten-Nr. Status
Vortragsarzt-Nr. VK gültig bis Datum

I

•Untersuchungsauftrag

•Befund-Nr.:

Datum:

•(vom Pathologen auszufüllen)

•Überweisung: ☐
Krankenhaus:

•Rechnung an Patient:
•Tel.

•Berufsgenossenschaft:

•Tel. Nachricht:
•Faxen
•LDT

•Dr. med. Simon Savin
•Facharzt für Pathologie
•Ludwig Erhard Allee 24
76131 Karlsruhe
Telefon: 0721.3548440
•Fax: 0721.3548441
•Email: info@pathologie-savin.de
www.pathologie-savin.de

•Praxisstempel / Datum / Unterschrift

•Frühere hist. Untersuchung: Befund-Nr.: Datum:

Material (Art u. Lok.):

oben rechts oben links
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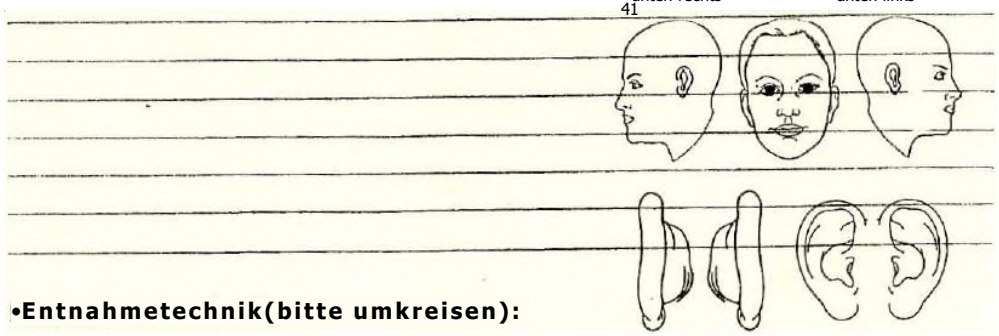
31 32 33 34 35 36 37 38
48 47 46 45 44 43 42 41
• unten rechts unten links



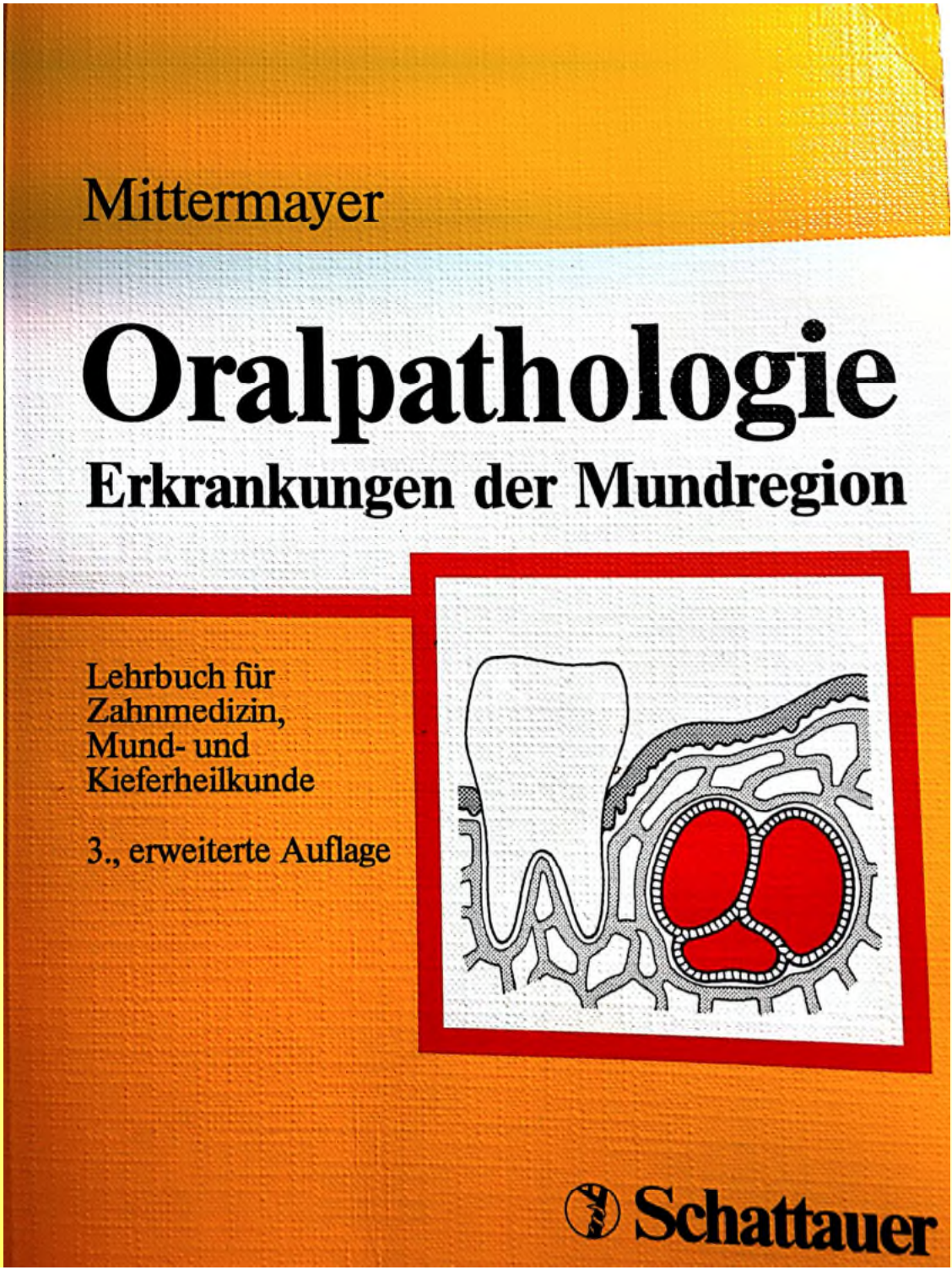
•Entnahmetechnik(bitte umkreisen):

•Probeexzision Vollständige Entfernung / Fadenmarkierung

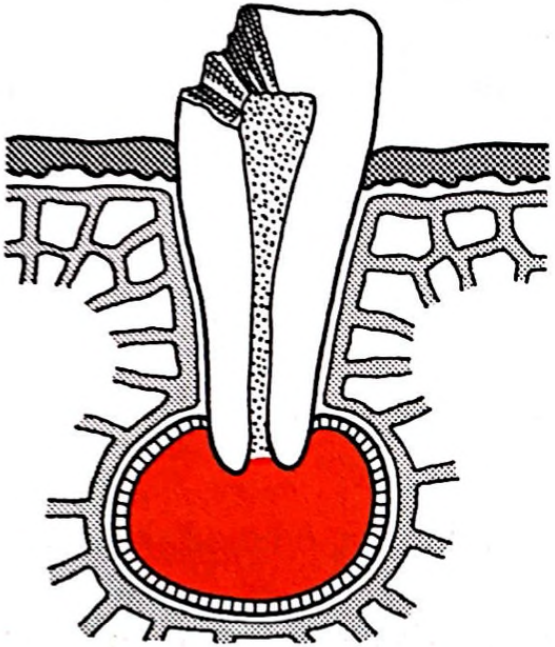
- Teilexzision Shaving/Curettage
- Tumoren, Fadenmarkierung bei ..... Uhr, Läsion-Farbe: Weiß Schwarz Rot

Zahnzysten

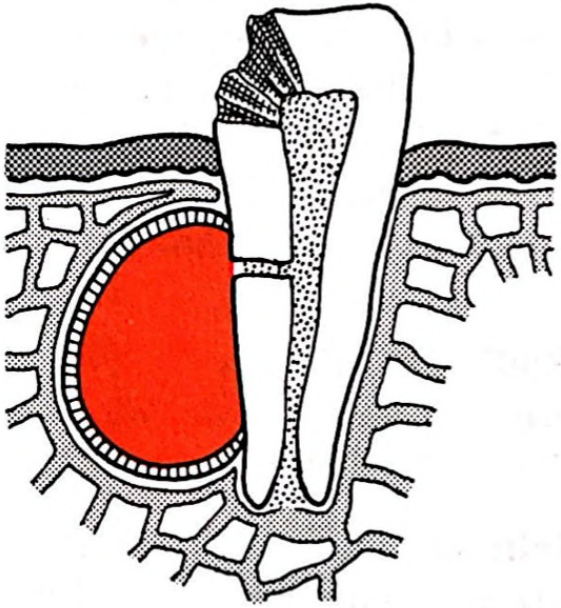
Schamtische Darstellung



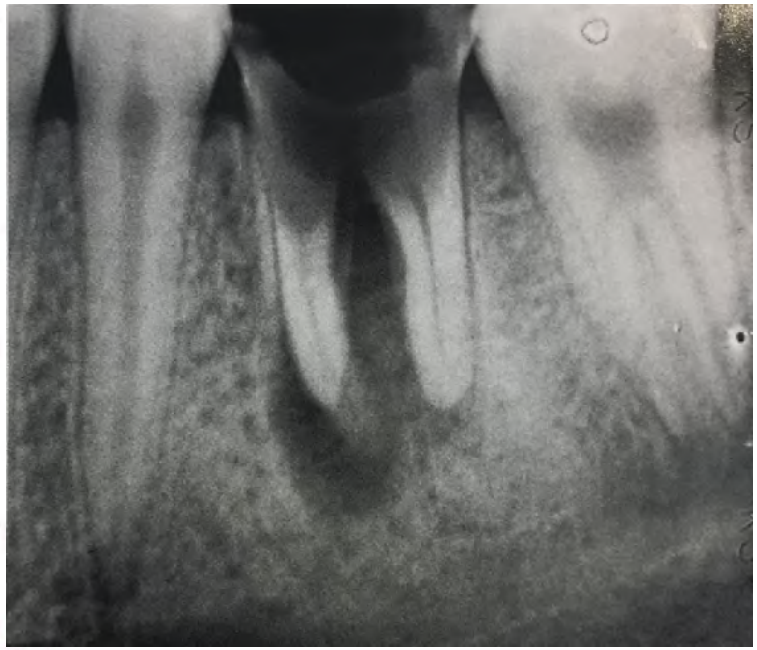
Radikuläre Zysten

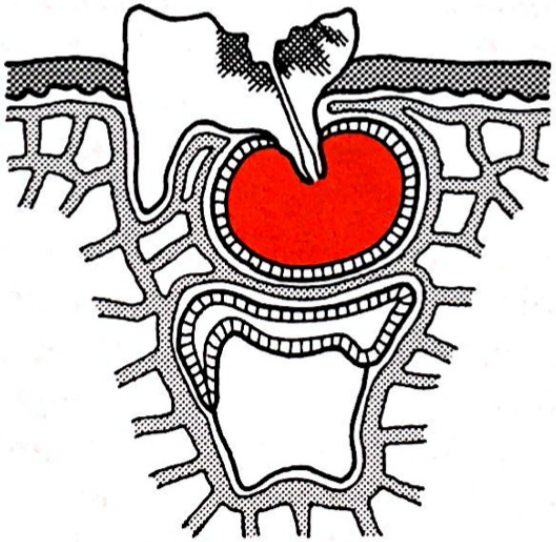


1. Apikale Zyste



2. Laterale Zyste



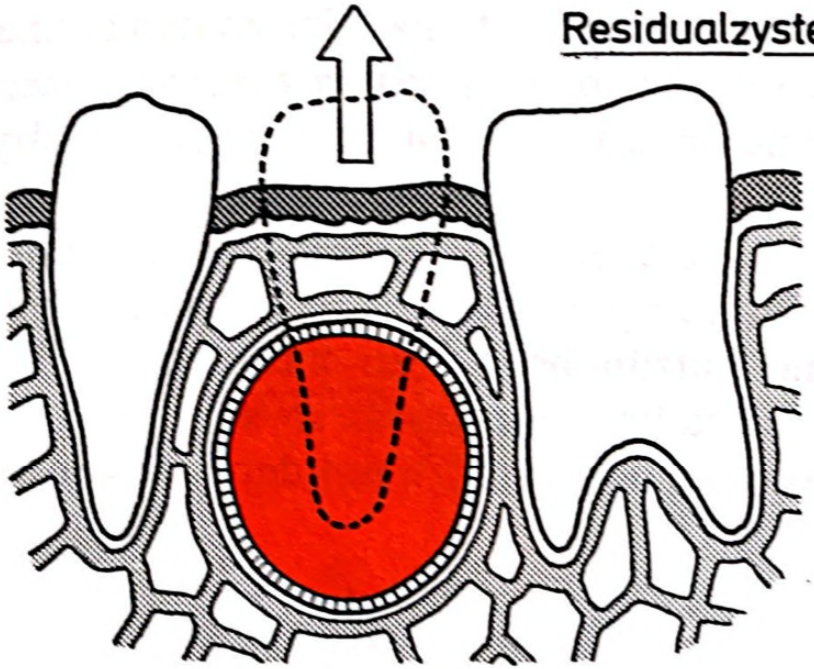


3. Radikuläre Milchzahnzyste

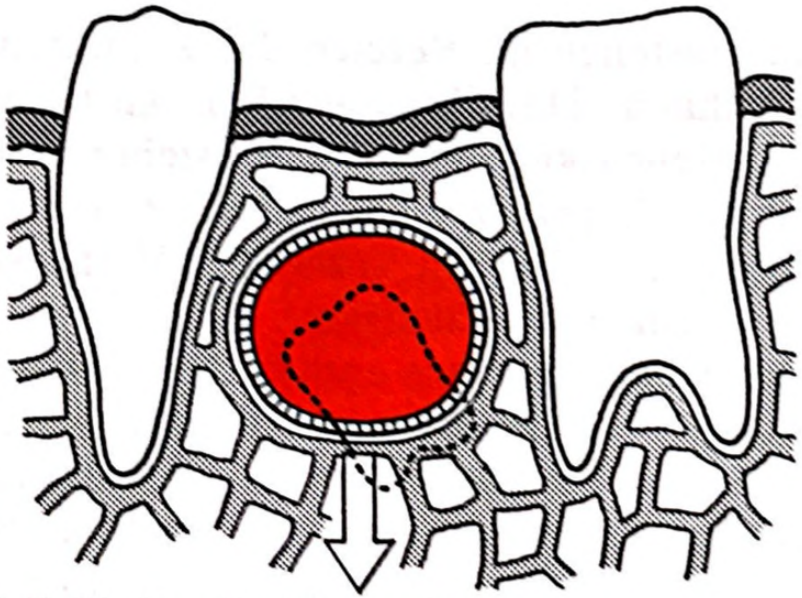
Die häufigsten odontogenen Zysten sind die radikulären Zysten (etwa 55 %),

die durch eine Entzündung in Folge einer

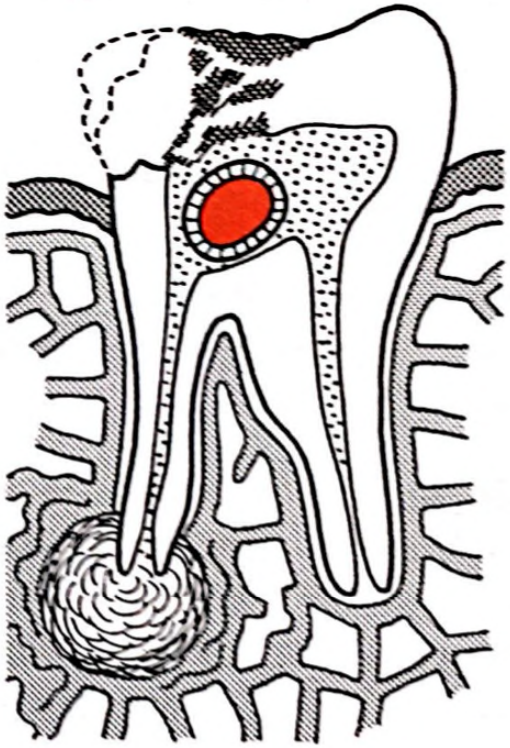
Residualzysten



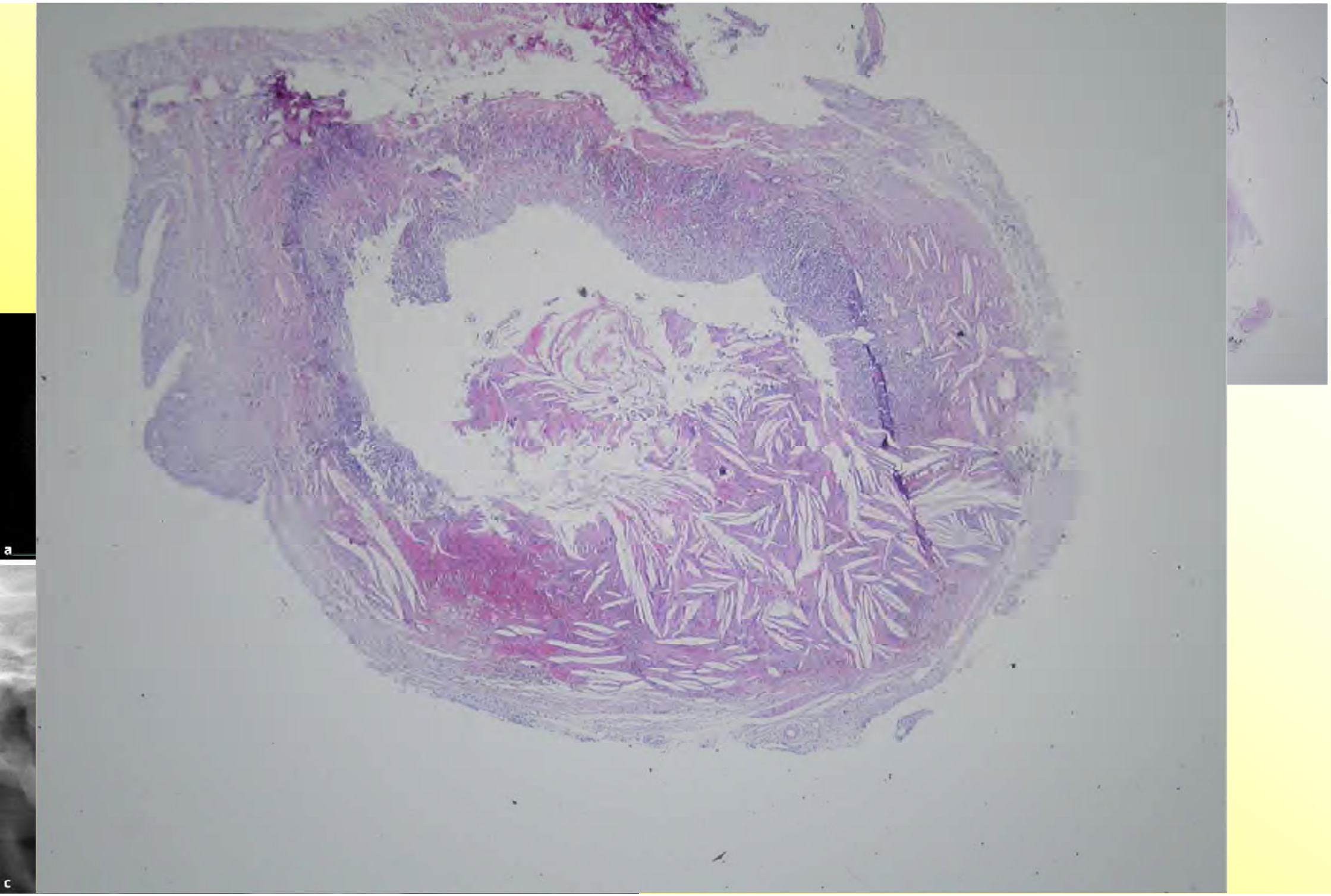
1. Radikuläre Residualzyste



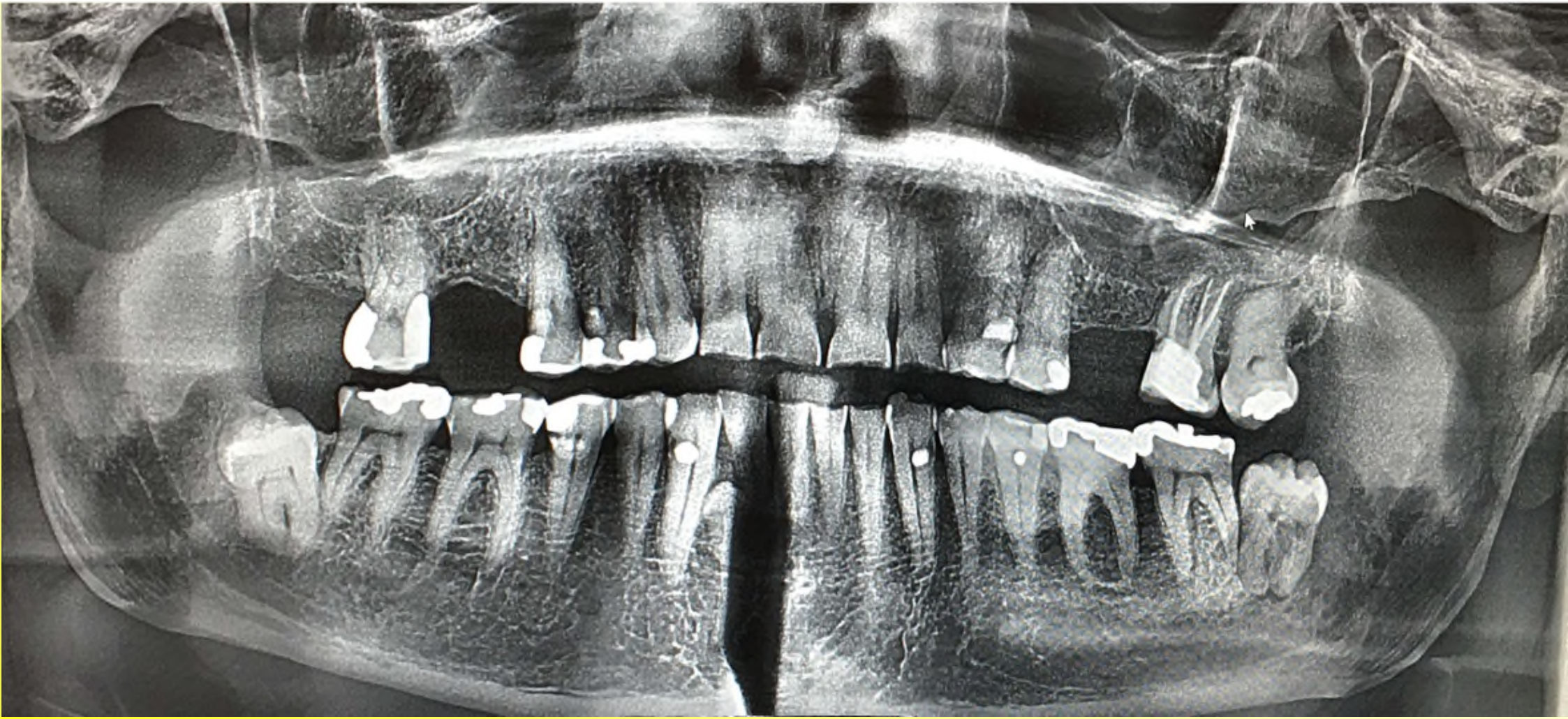
2. Follikuläre Residualzyste

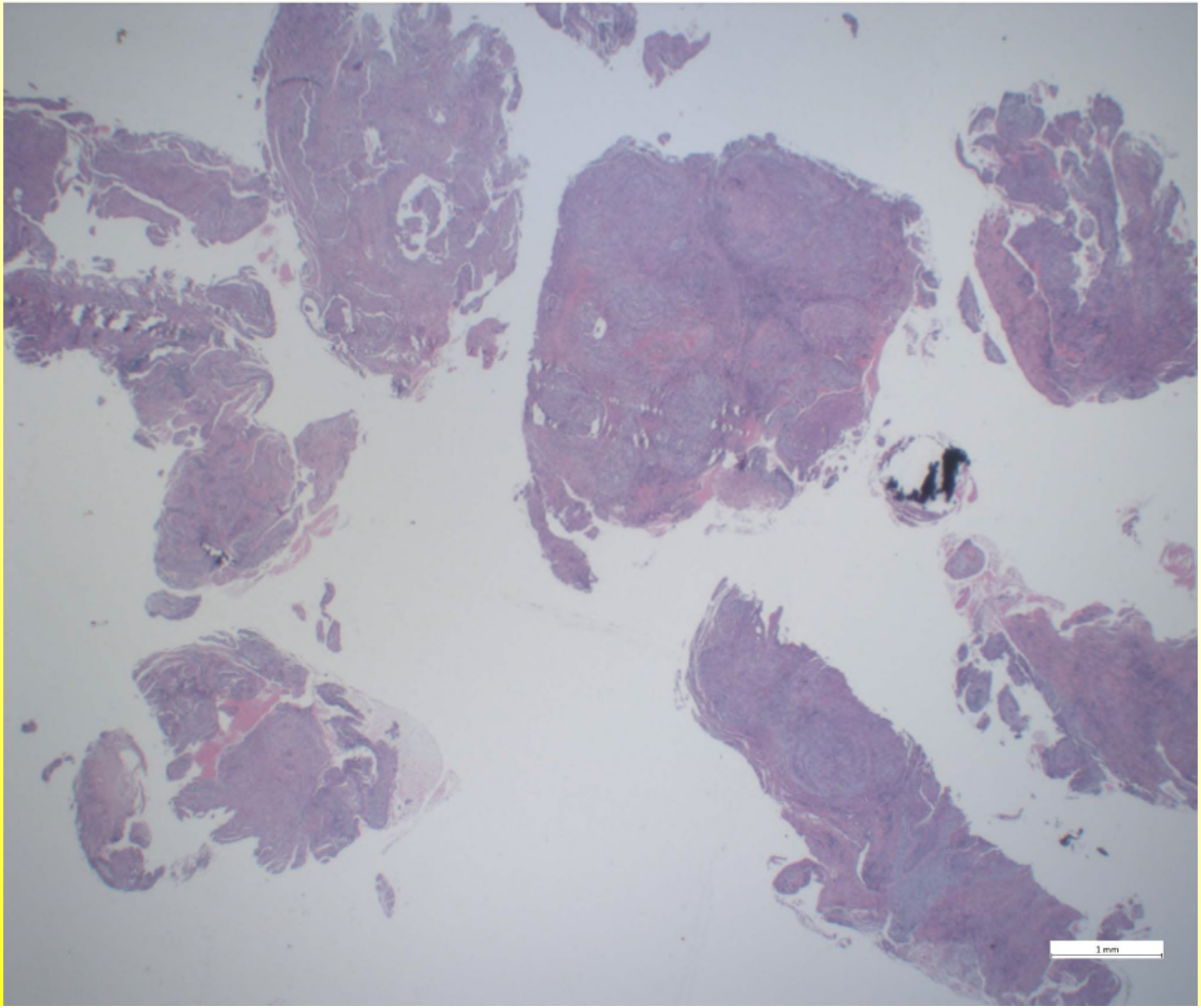


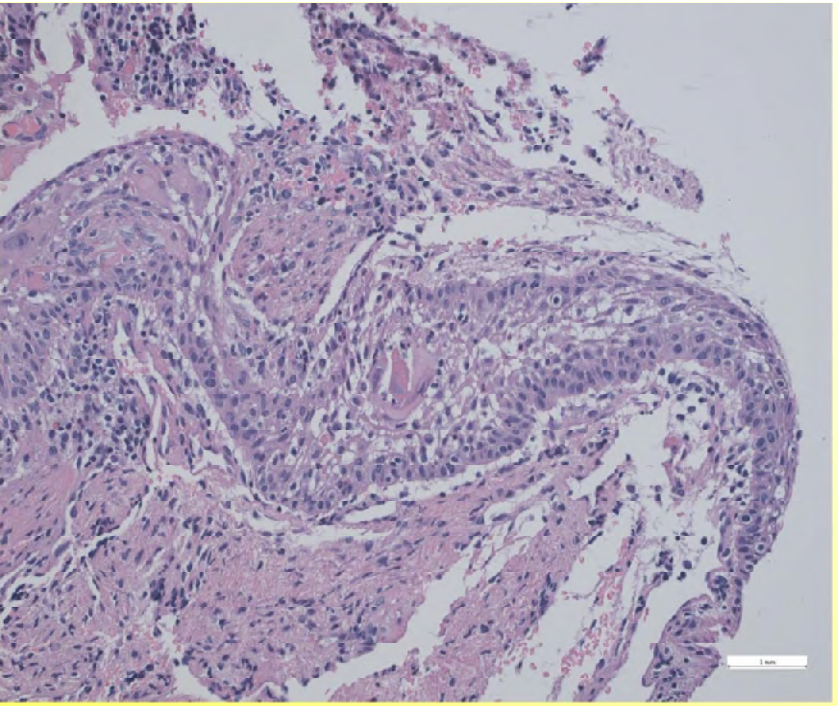
3. Pulpazyste

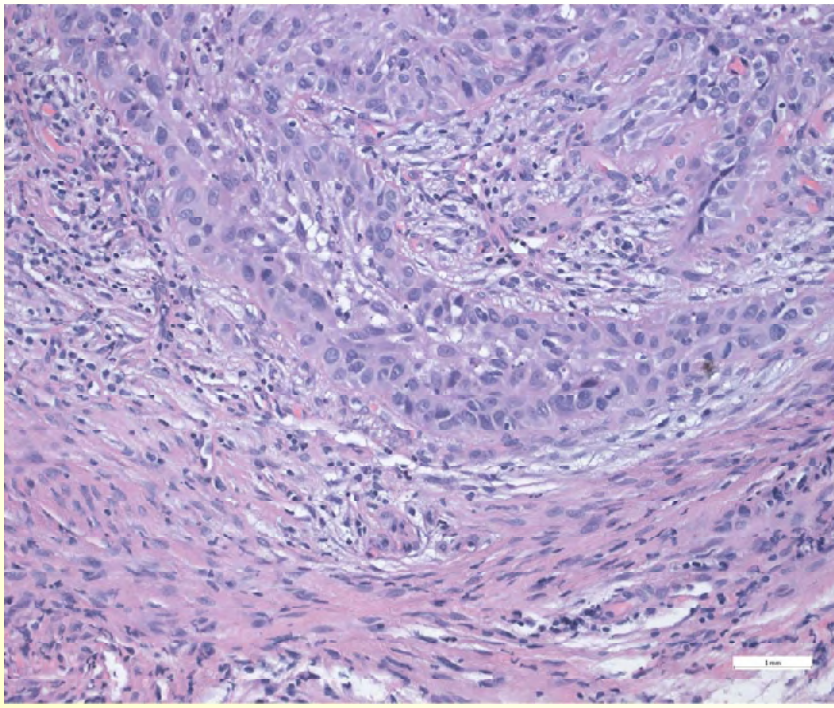

a
c

Radikuläre Zyste

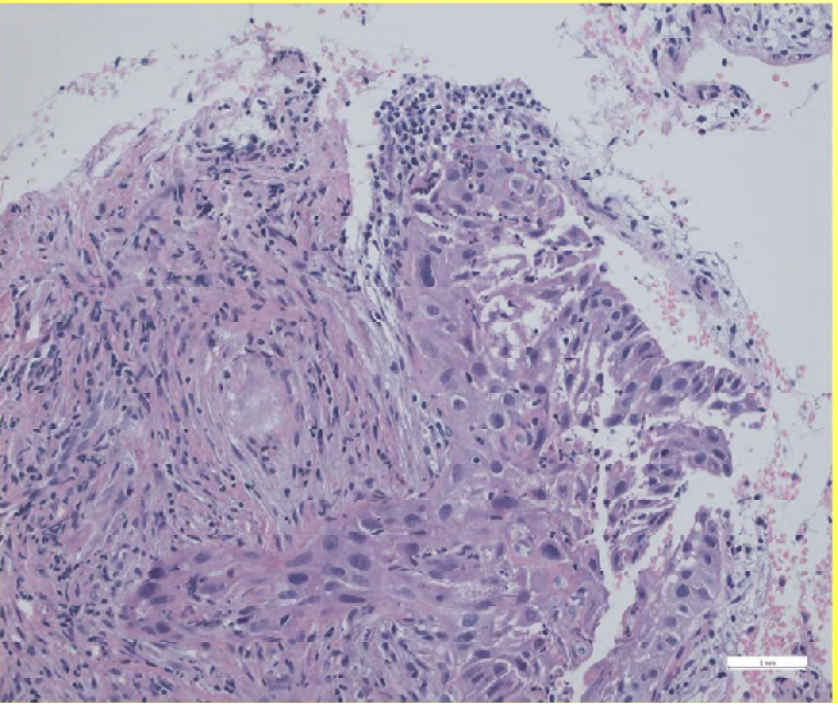


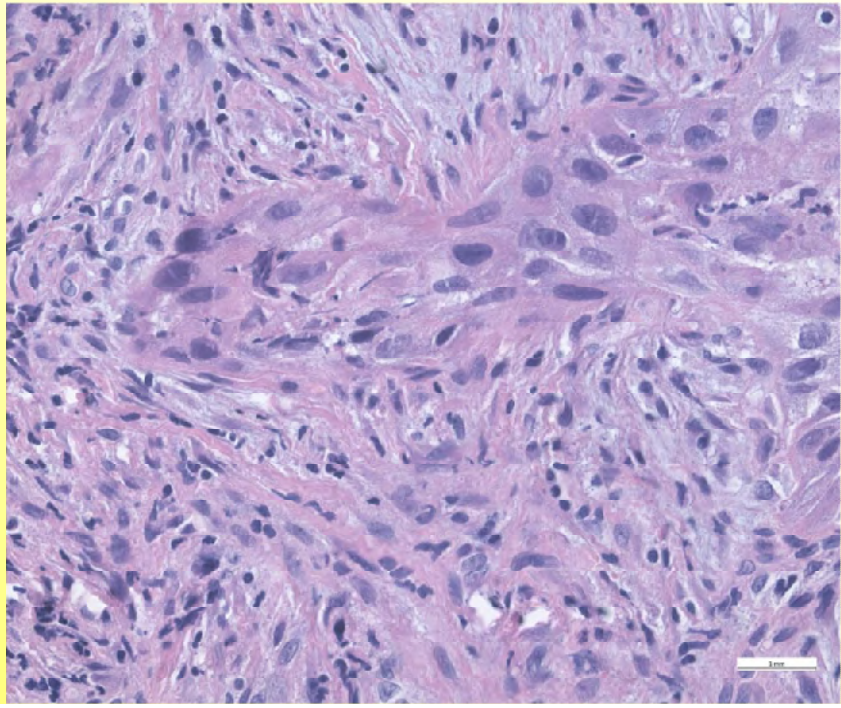

1 mm

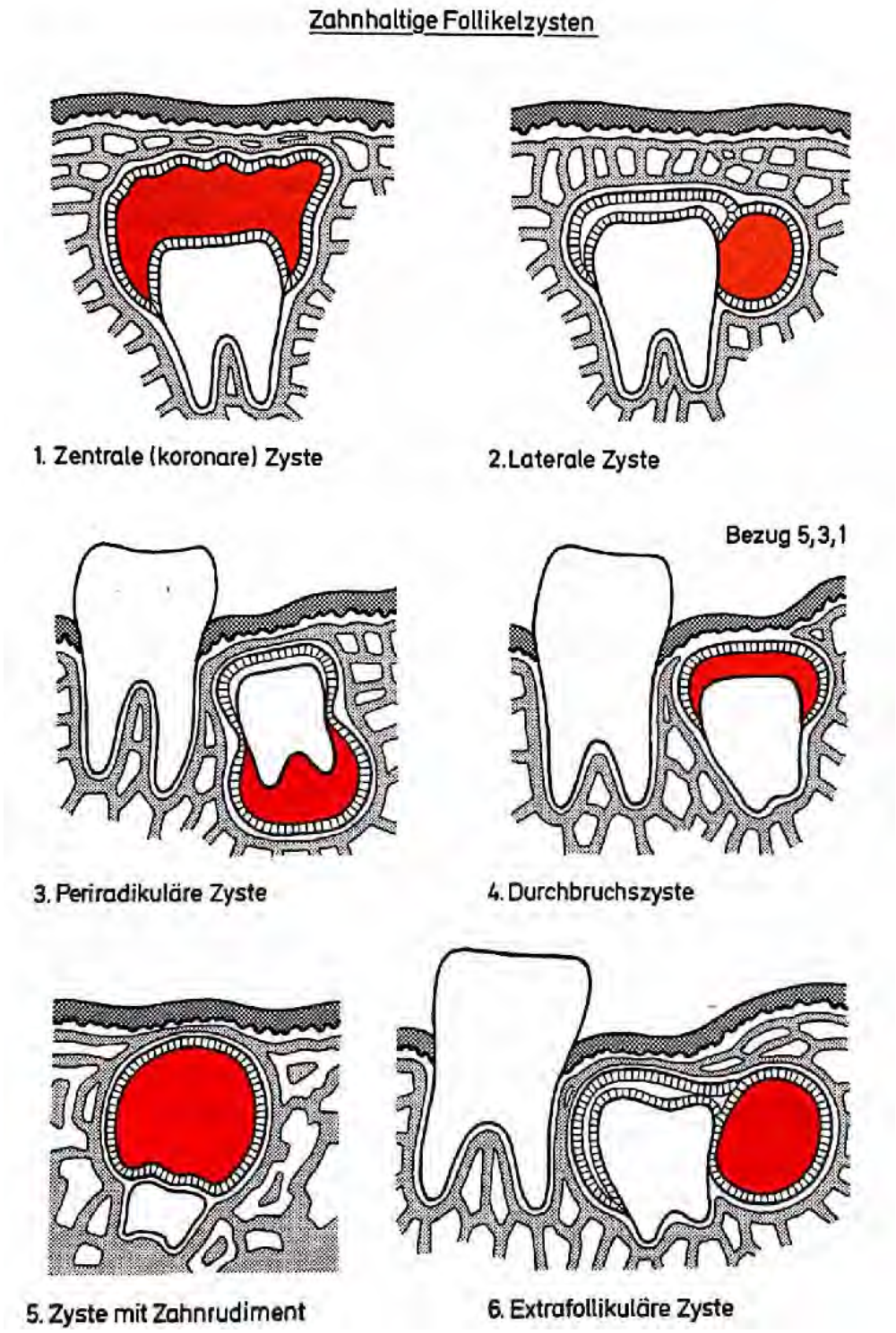




Entartung in ein Pattenepithel-Karzinom

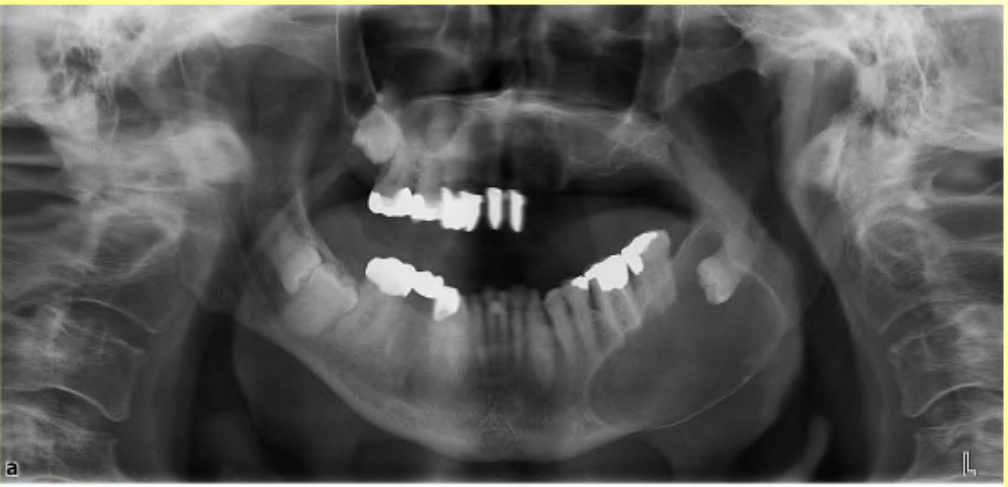


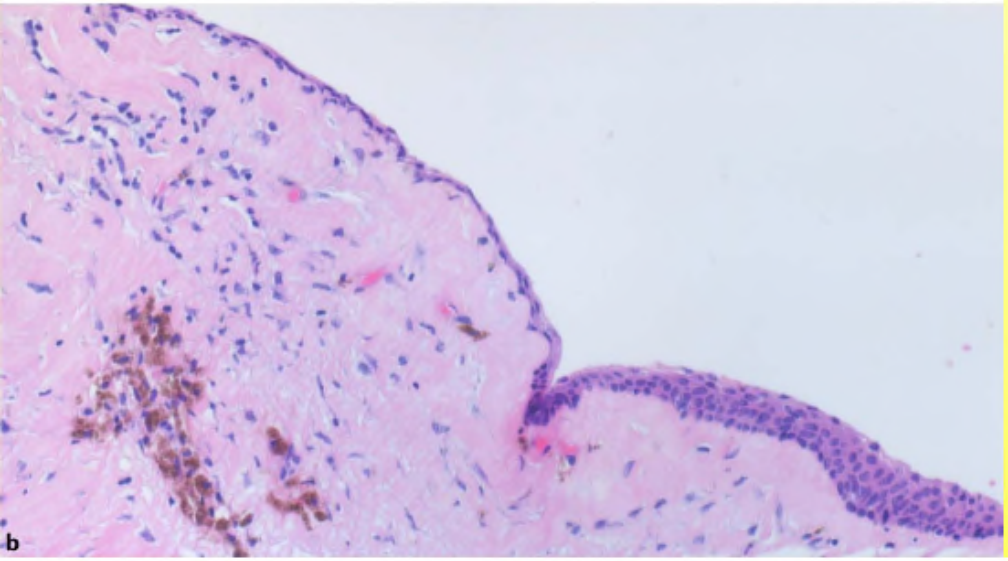


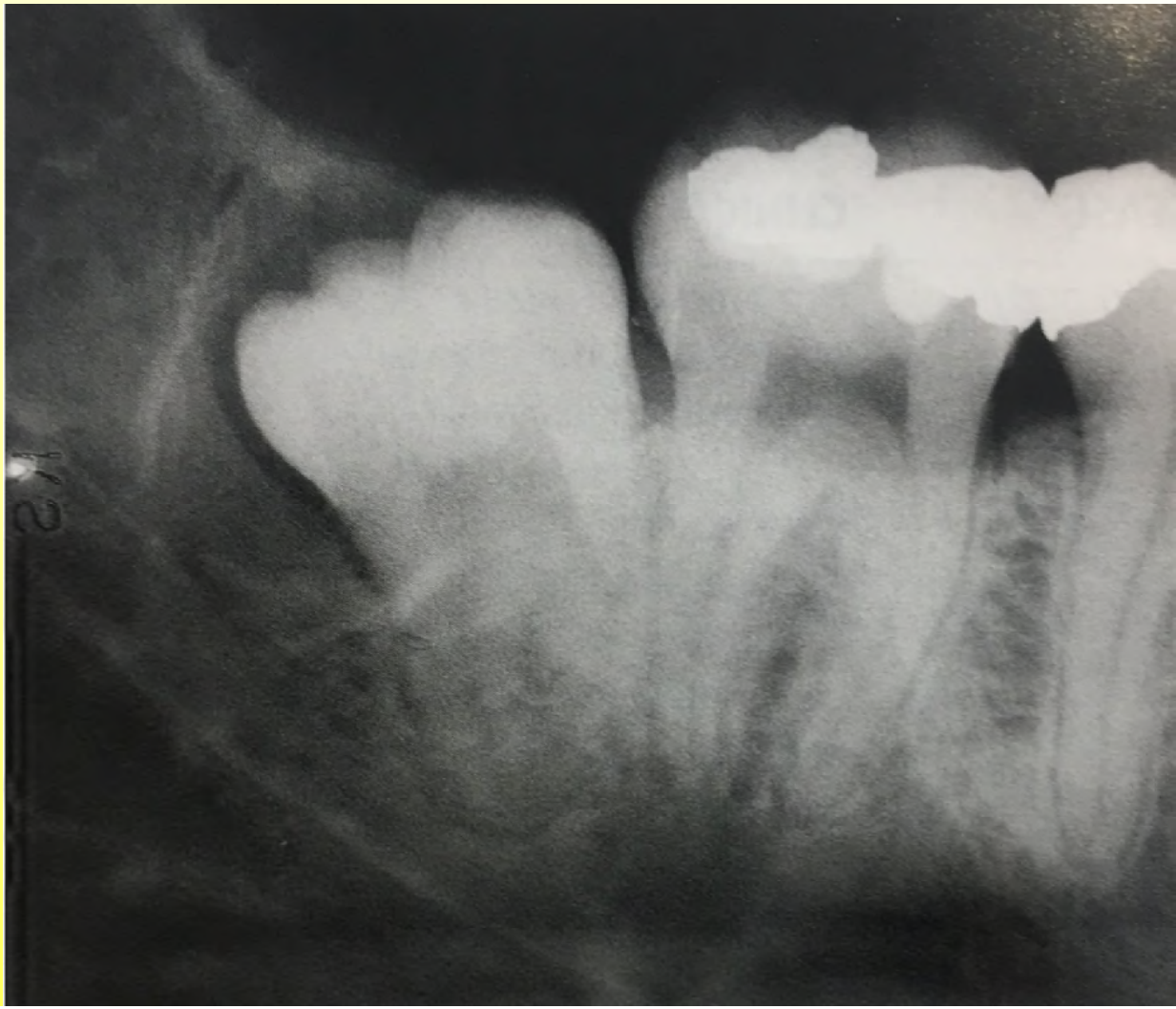


Die zweithäufigsten odontogenen Zysten überhaupt sind die follikulären Zysten (etwa 20 %), die durch eine Flüssigkeitsansammlung zwischen dem reduzierten Schmelzepithel und der Zahnkrone eines noch nicht durchgebrochenen Zahns entstehen.

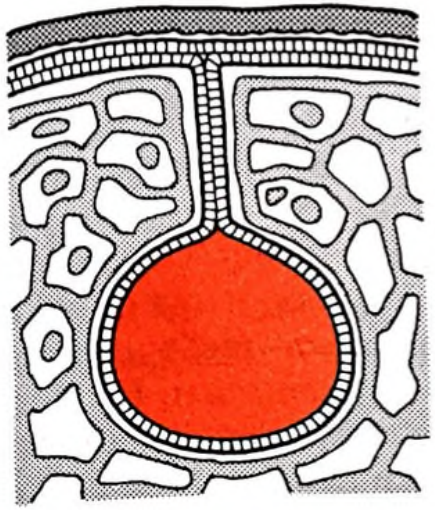
Sie können prinzipiell an jedem Zahn vorkommen, sind aber an den **Weisheitszähnen**, vor allem im Unterkiefer, mit Abstand am häufigsten.



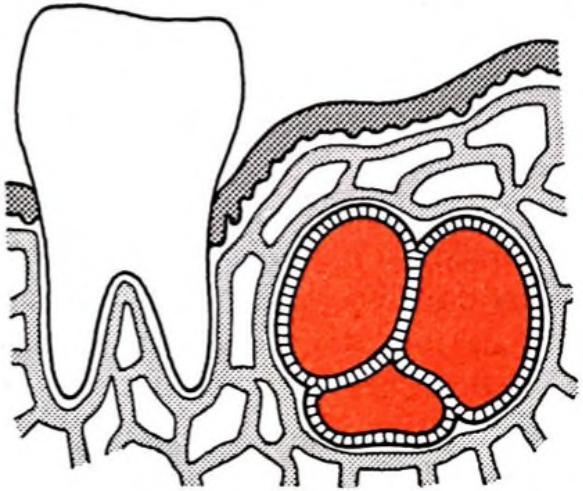




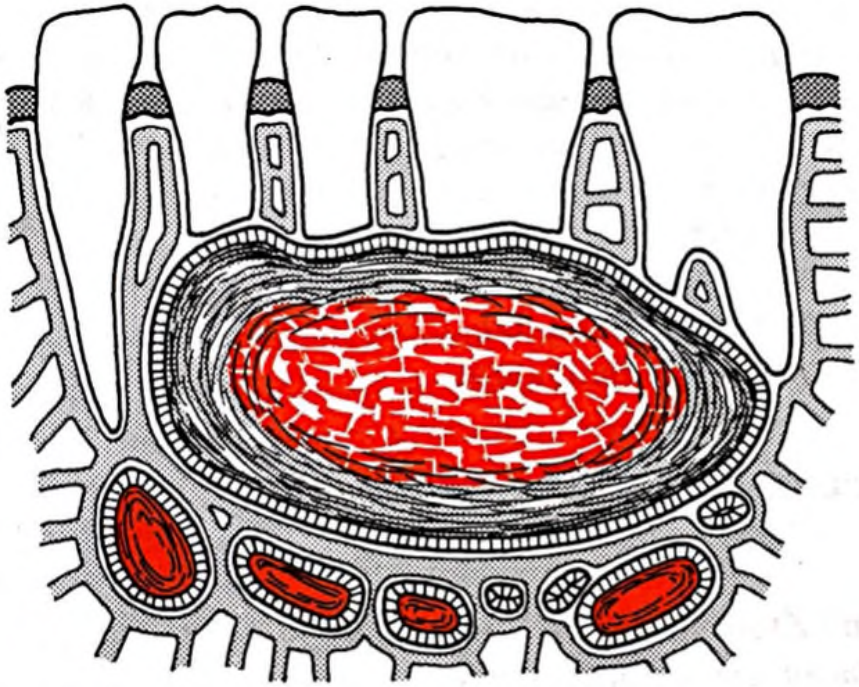
Primordialzysten



1. Primordialzyste



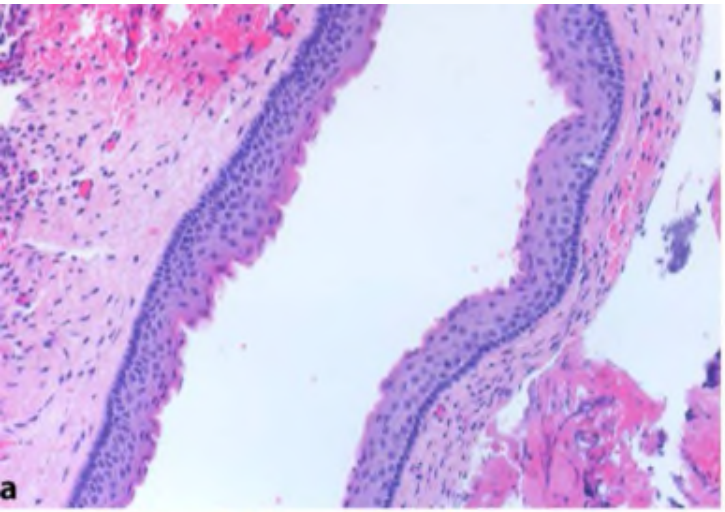
2. Mehrkammrige Primordialzyste

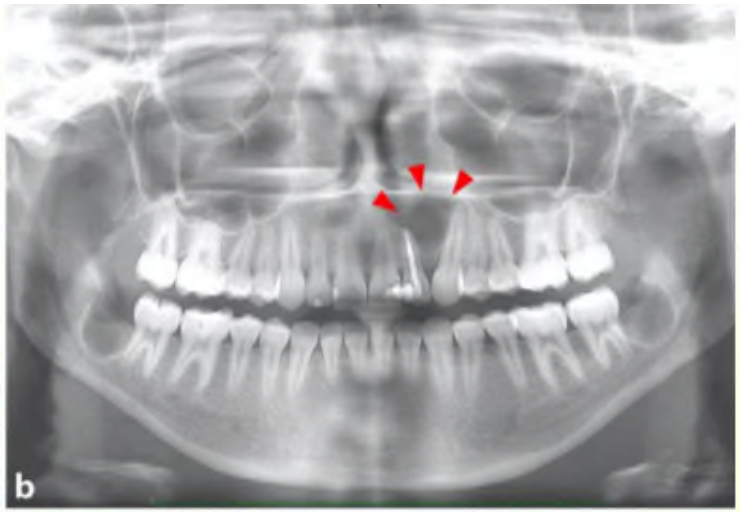


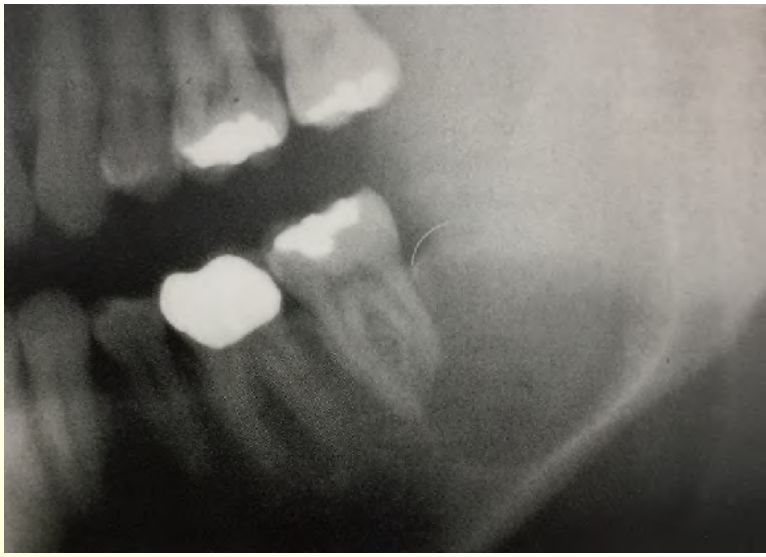
3. Keratozyste

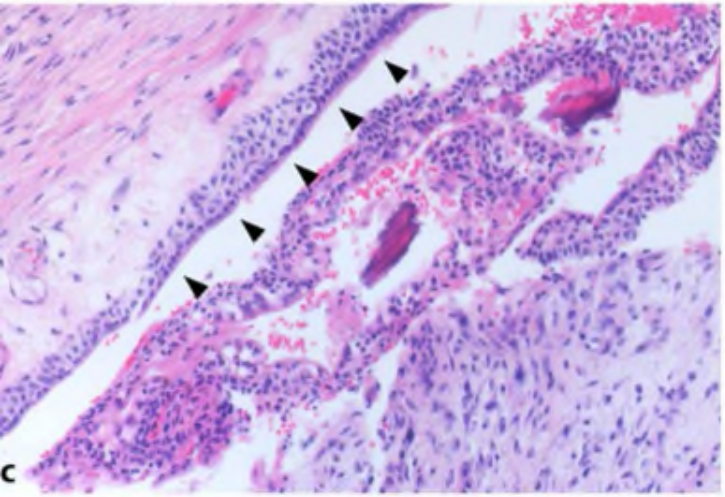
die odontogene Keratozyste.

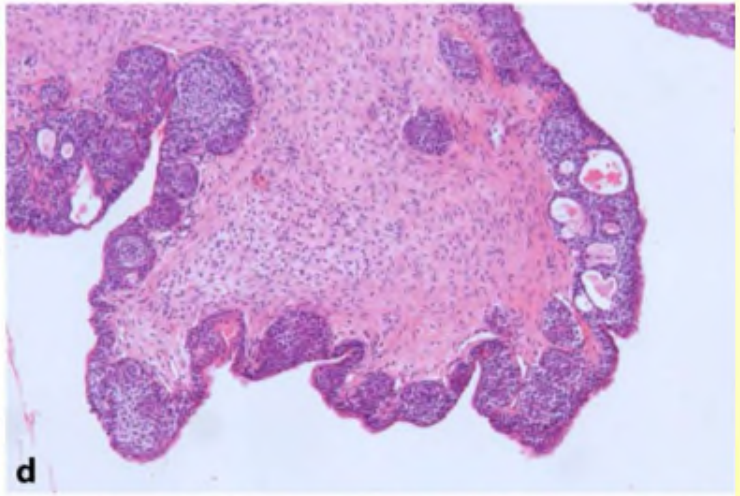
Klinisch handelt es sich um die dritthäufigsten Kieferzysten (10–20 %), die ebenfalls vor allem im hinteren Anteil der Mandibula vorkommen. Die Altersverteilung ist breit, am häufigsten kommen die Läsionen in der 2. bis 4. Dekade vor.

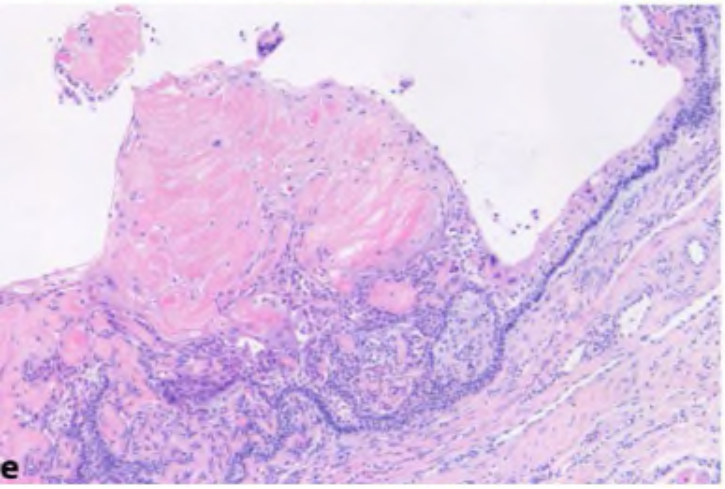


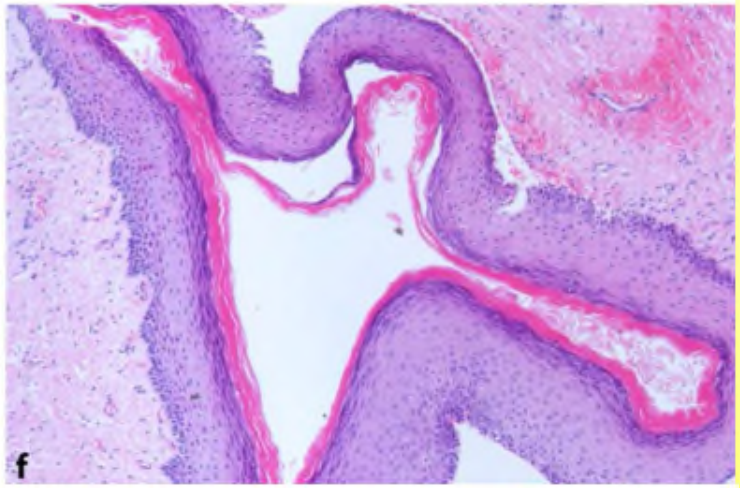








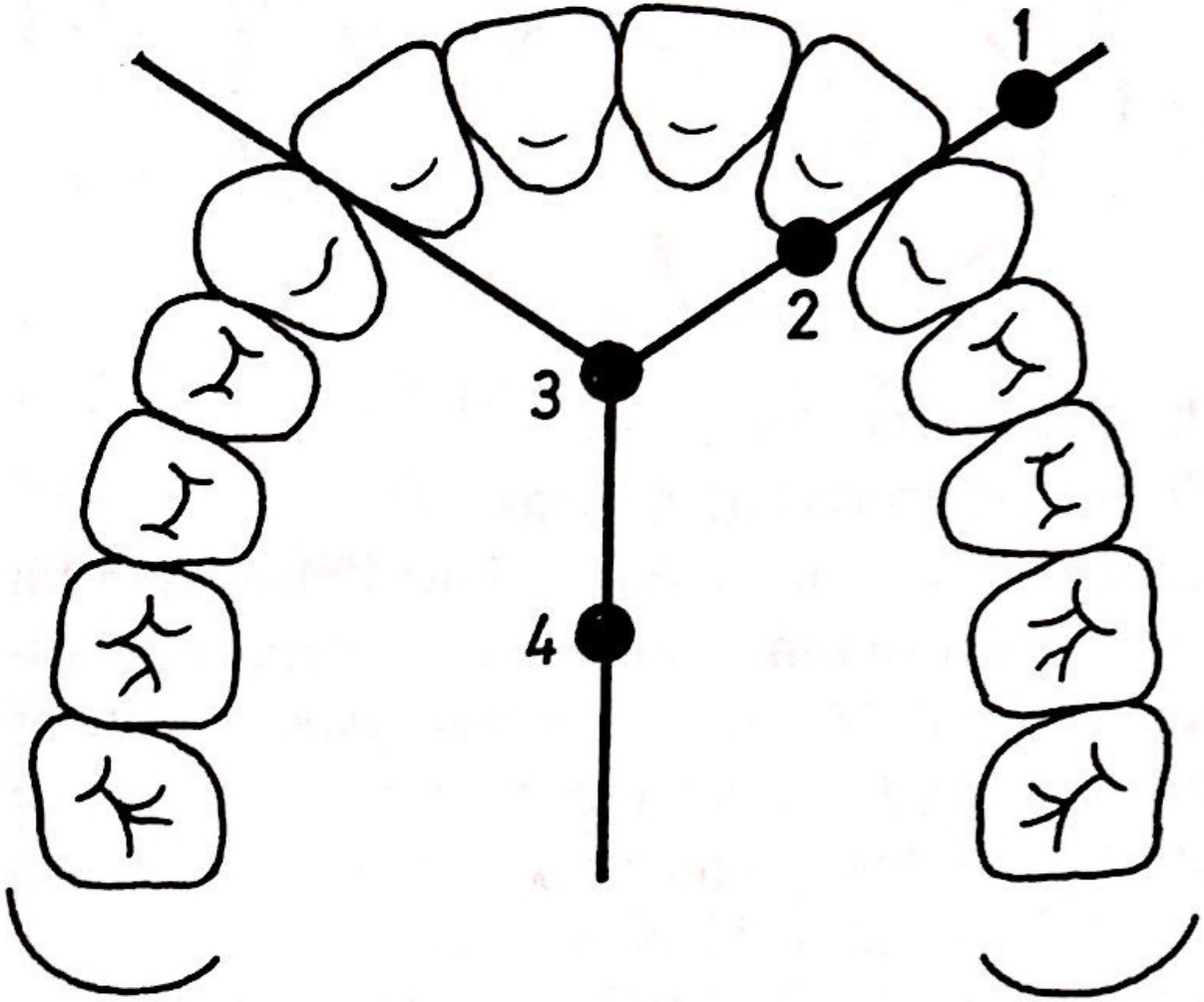


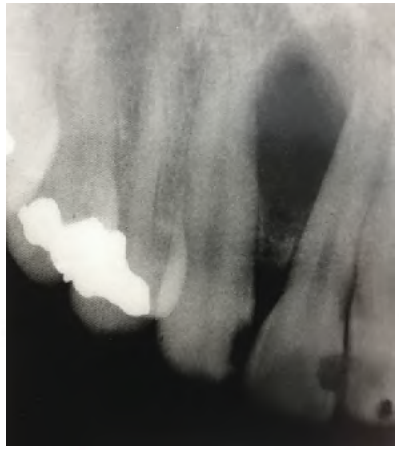


Keratozyste

Nicht odontogene Zysten

"Fissural"-Zysten des Oberkiefers





2.

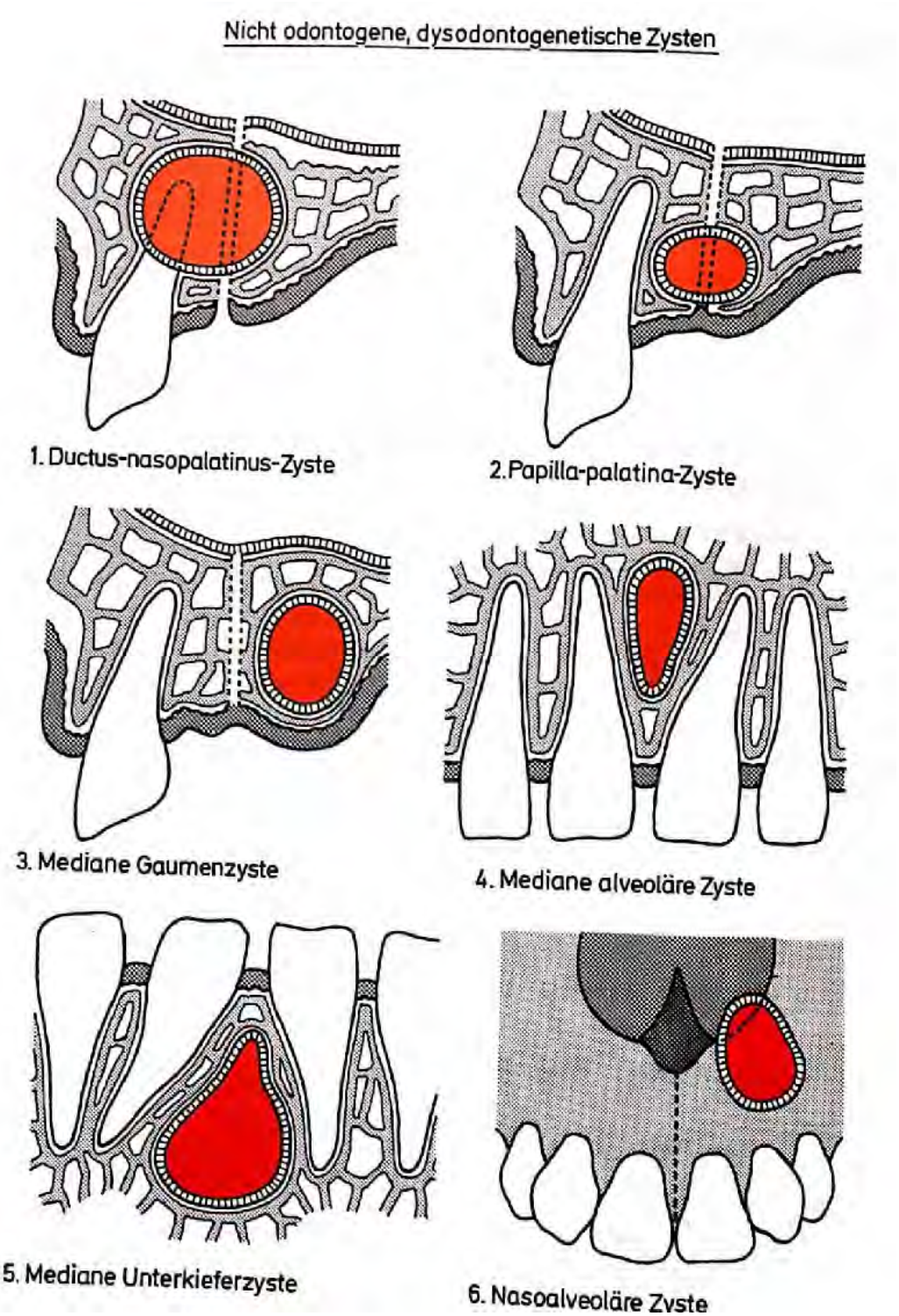
1. naso-labial

2. globulo-maxillar

3. naso-palatinal

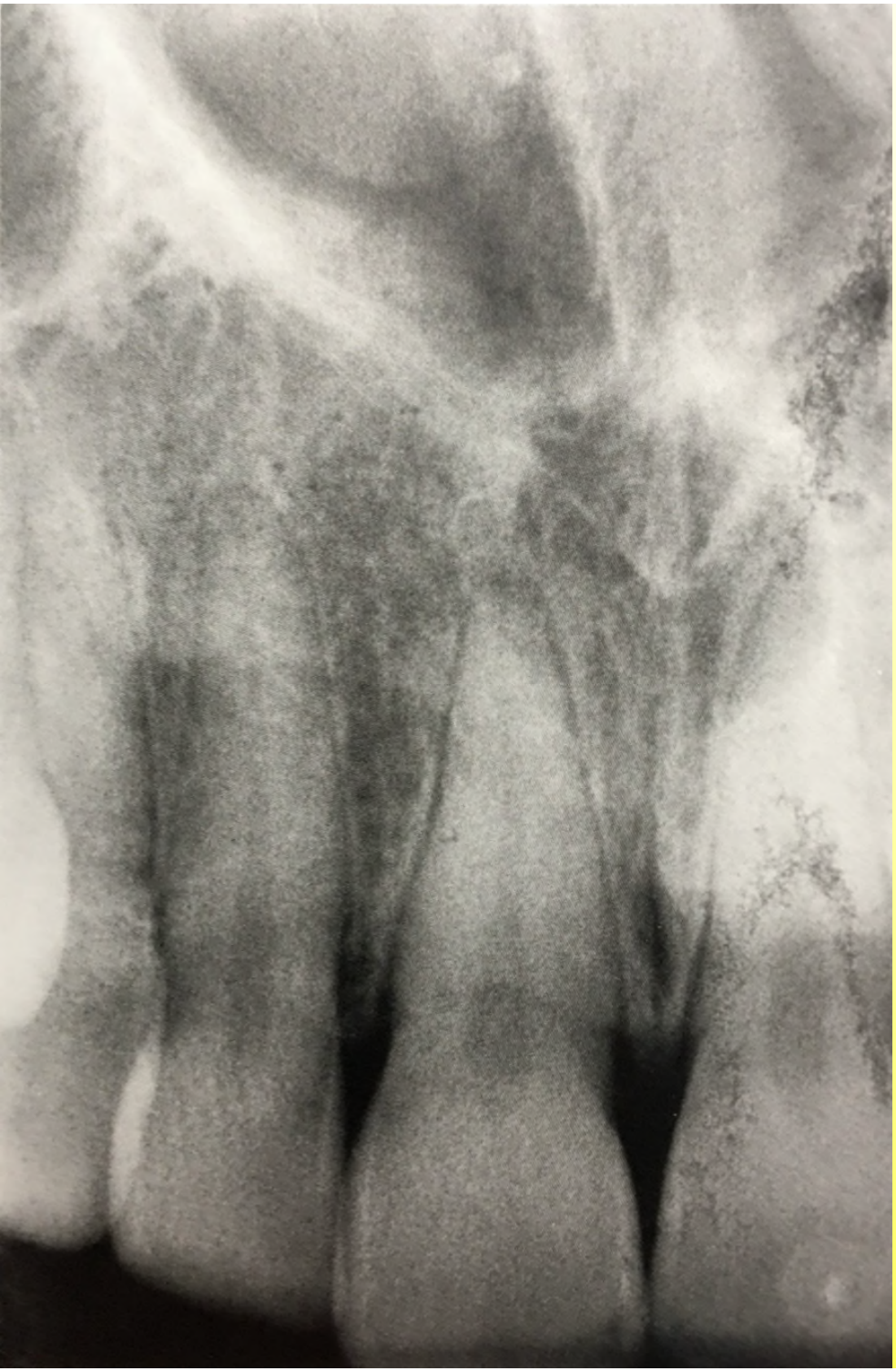
4. median palatinal

—— Fusions-grenzen



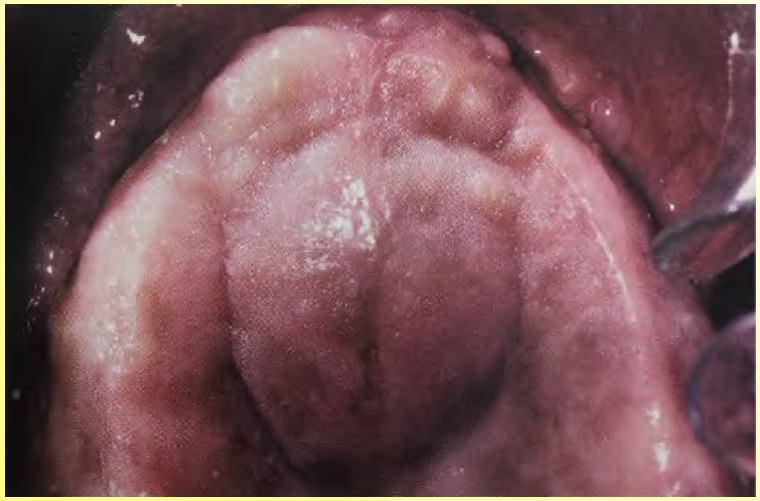
Nicht odontogene Zysten

In dieser Gruppe werden nur 2 Läsionen unterschieden, die bereits klinisch-Radiologisch in der Regel eindeutig zugeordnet werden können: die häufigere nasopalatinale Zyste (Ductus-nasopalatinus-Zyste, Canalis-incisivus-Zyste) und die nasolabiale Zyste.



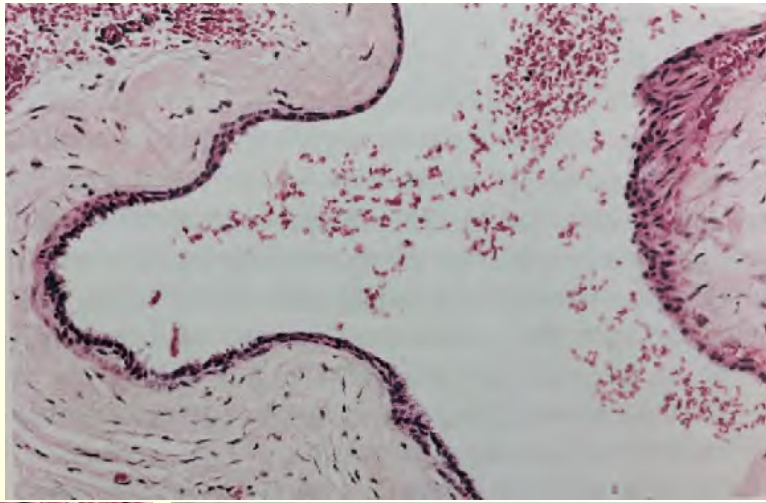
Nicht odontogene Zysten

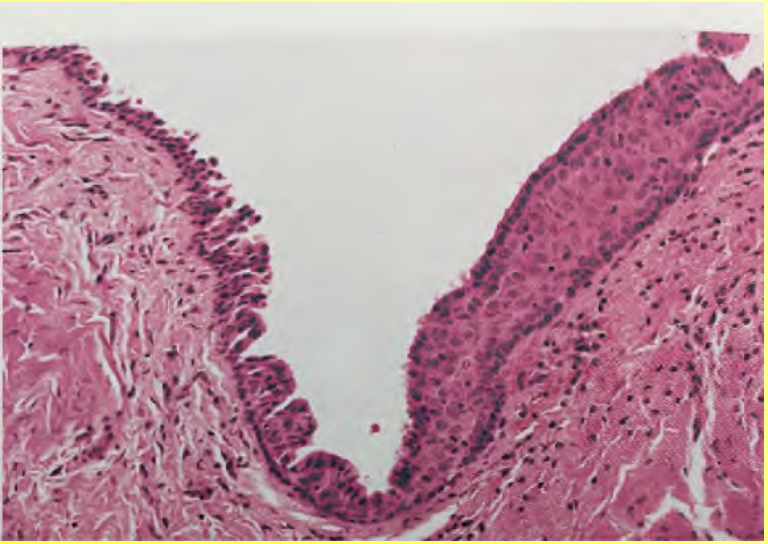
Nasopalatinale Zysten entstehen wahrscheinlich aus Epithelresten des Ductus nasopalatinus und stellen sich in der Oberkieferbissaufnahme als scharf begrenzte und in der Mittellinie gelegene Osteolyse im vorderen Anteil des harten Gaumens dar.

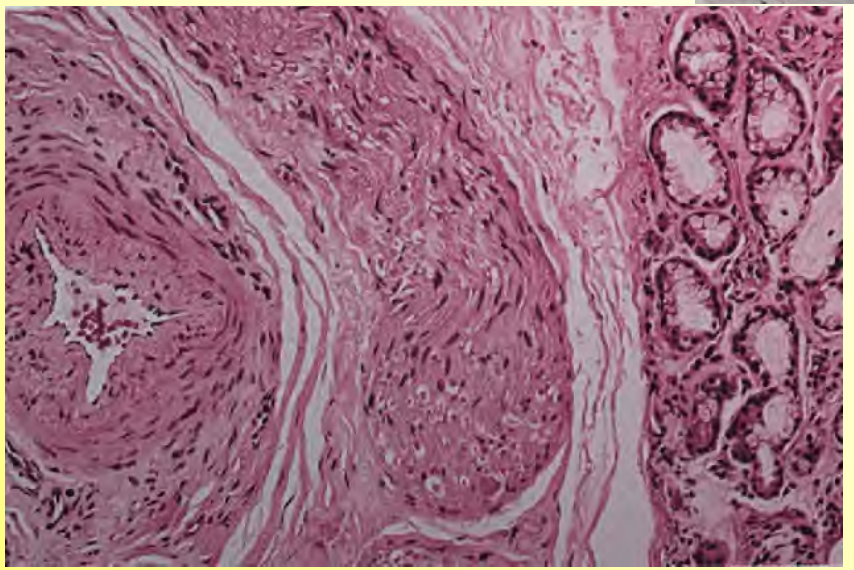


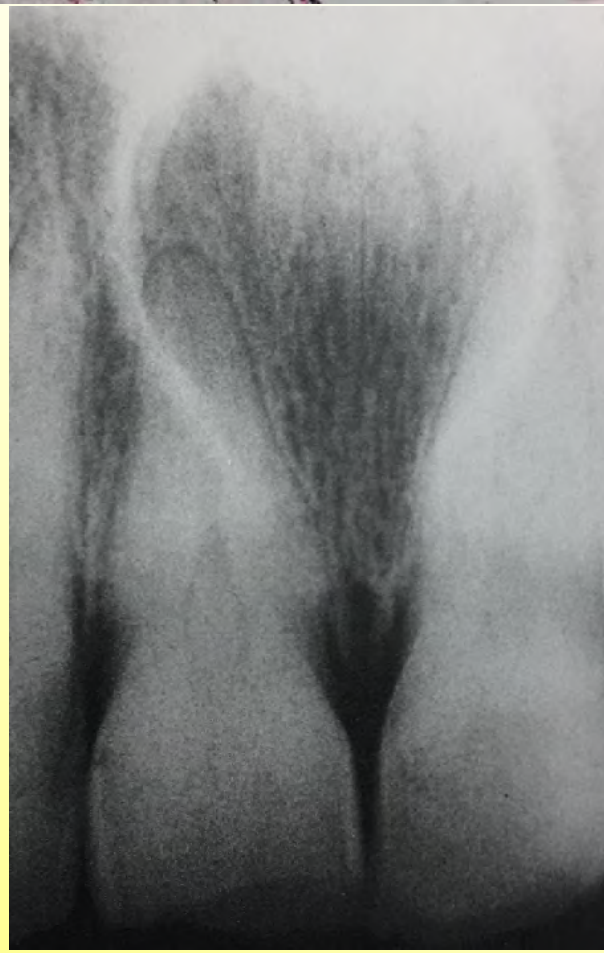
Nicht odontogene Zysten

Nasopalatinale Zyste



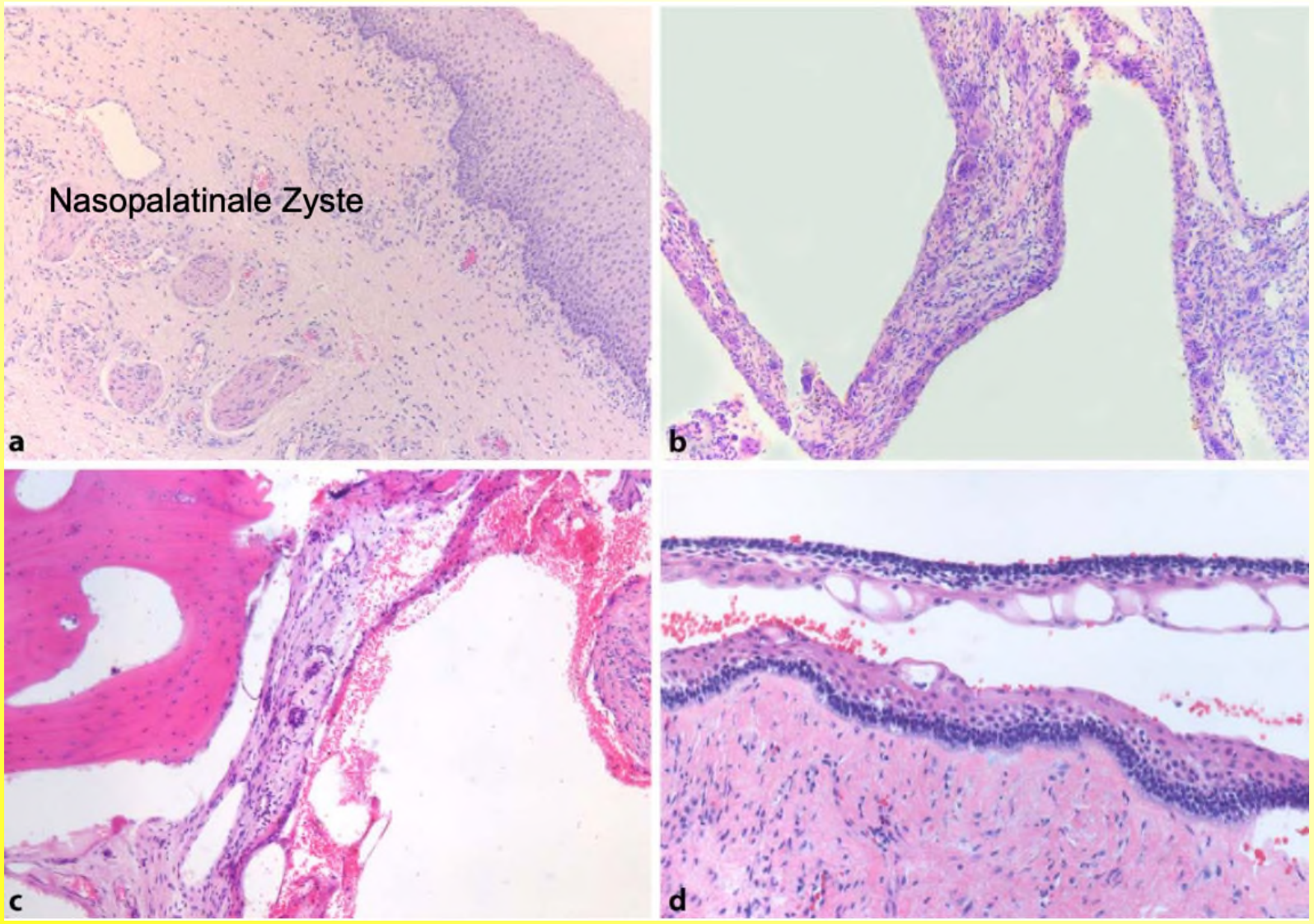




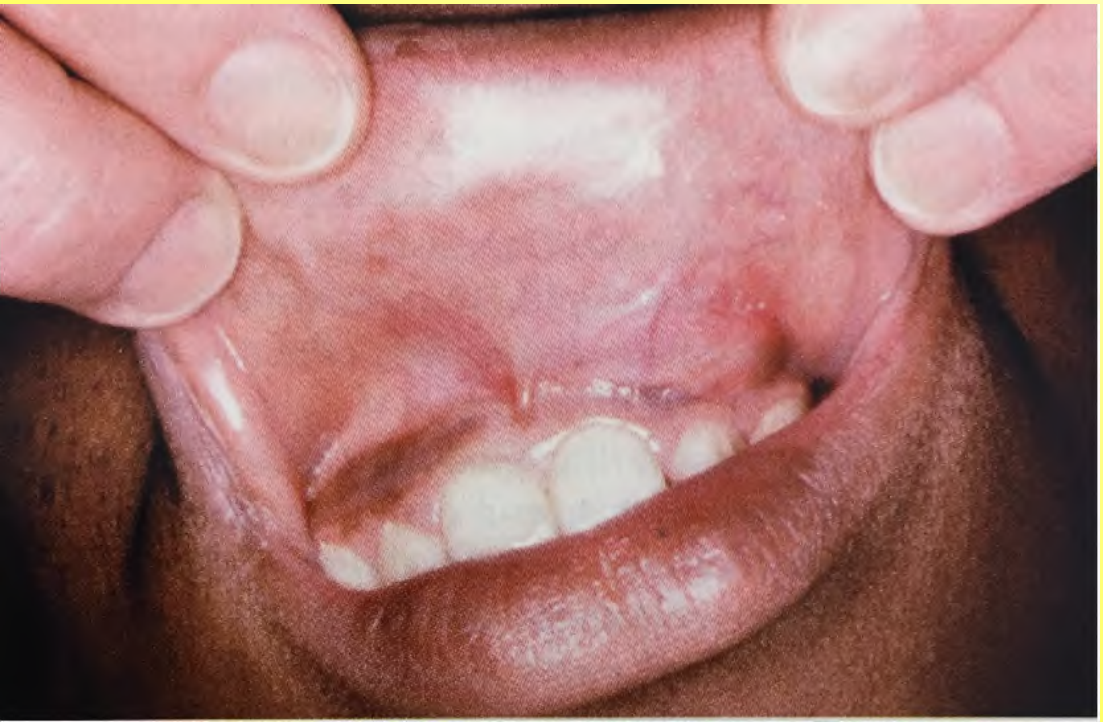


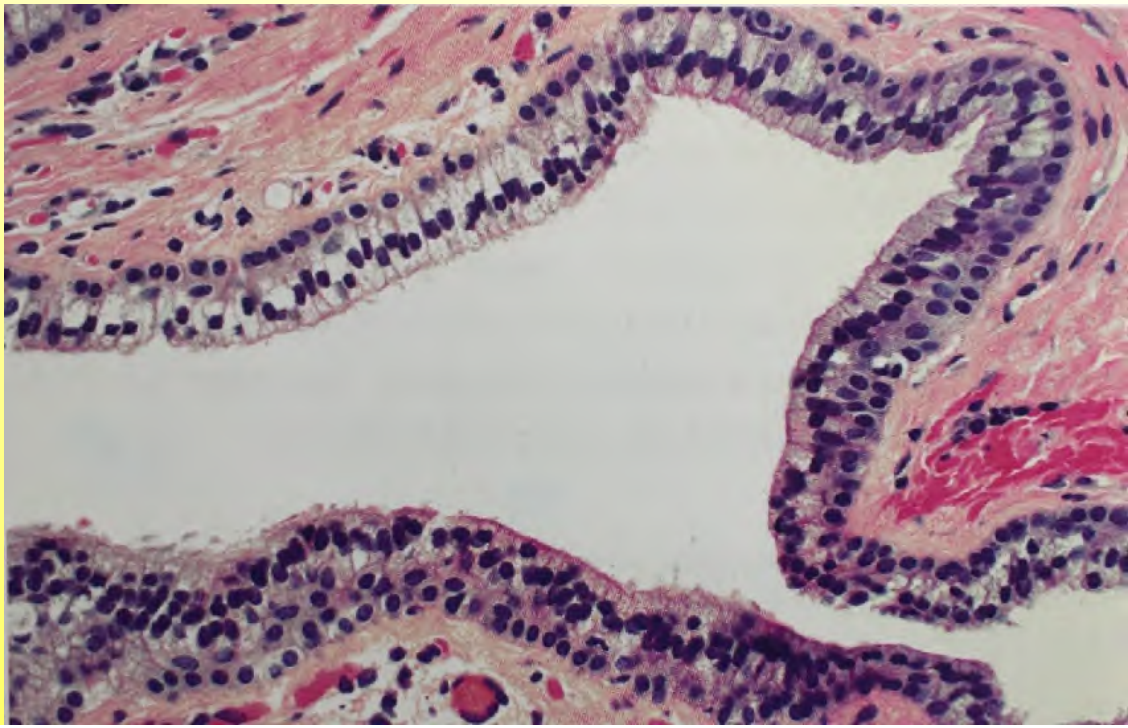
Histologisch werden die Zysten von Plattenepithel ausgekleidet, häufig kommen auch Abschnitte mit respiratorischem Epithel vor. Typischerweise finden sich in der Wand prominente neurovaskuläre Bündel und gelegentlich auch muzinöse Drüsen

Nasopalatinale Zyste



Nasolabiale Zysten entstehen im Weichgewebe (extraossär) innerhalb der nasolabialen Falten seitlich der Nasenflügel und können diese vorwölben, in etwa 10 % kommen sie bilateral vor. Die Auskleidung erfolgt in der Regel durch ein mehrreihiges Zylinderepithel ohne Zilien, gelegentlich kommen Plattenepithelmetaplasien vor.





Odontogenic Tumors

DISEASE	CLINICAL FEATURES	RADIOGRAPHIC APPEARANCE	OTHER FEATURES
Ameloblastoma	Fourth and fifth decades; mandibular molar-ramus area favored	Lucent; usually well circumscribed; unilocular or multilocular	May arise in wall of dentigerous cyst; may exhibit aggressive behavior; rarely metastasizes (usually to lung); recurrence rate lower for cystic type; asymptomatic, uncommon
Squamous odontogenic tumor	Mean age of 40 years; second through seventh decades; alveolar process; anterior more than posterior	Lucency	Conservative therapy; few recurrences, rare
Calcifying epithelial odontogenic tumor (Pindborg tumor)	Mean age around 40 years; second through tenth decades; mandibular molar- ramus area favored	Lucent with or without opaque foci; usually well circumscribed; unilocular or multilocular	Behavior and prognosis are similar to those for ameloblastoma; rare
Clear cell odontogenic tumor	Seventh decade; mandible, maxilla	Lucency	Rare
Adenomatoid odontogenic tumor	Second decade; anterior jaws	Well-defined lucency; may have opaque foci	Usually associated with crown of impacted tooth; no symptoms
Odontogenic myxoma	Mean age of 30 years; range 10 to 50 years; any area of jaws	Lucent lesion; often multilocular or honeycombed; may be poorly defined peripherally	Tumors may exhibit aggressive behavior; no symptoms; uncommon; recurrence not uncommon
Central odontogenic fibroma	Any age; any area of jaws	Lucency; usually multilocular	Two microscopic subtypes exhibit same benign clinical behavior; differentiate from desmoplastic fibroma
Cementifying fibroma	Fourth and fifth decades; posterior mandible	Well-defined lucent lesion; may have opaque foci	Asymptomatic; grows by local expansion; recurrence unlikely; rare

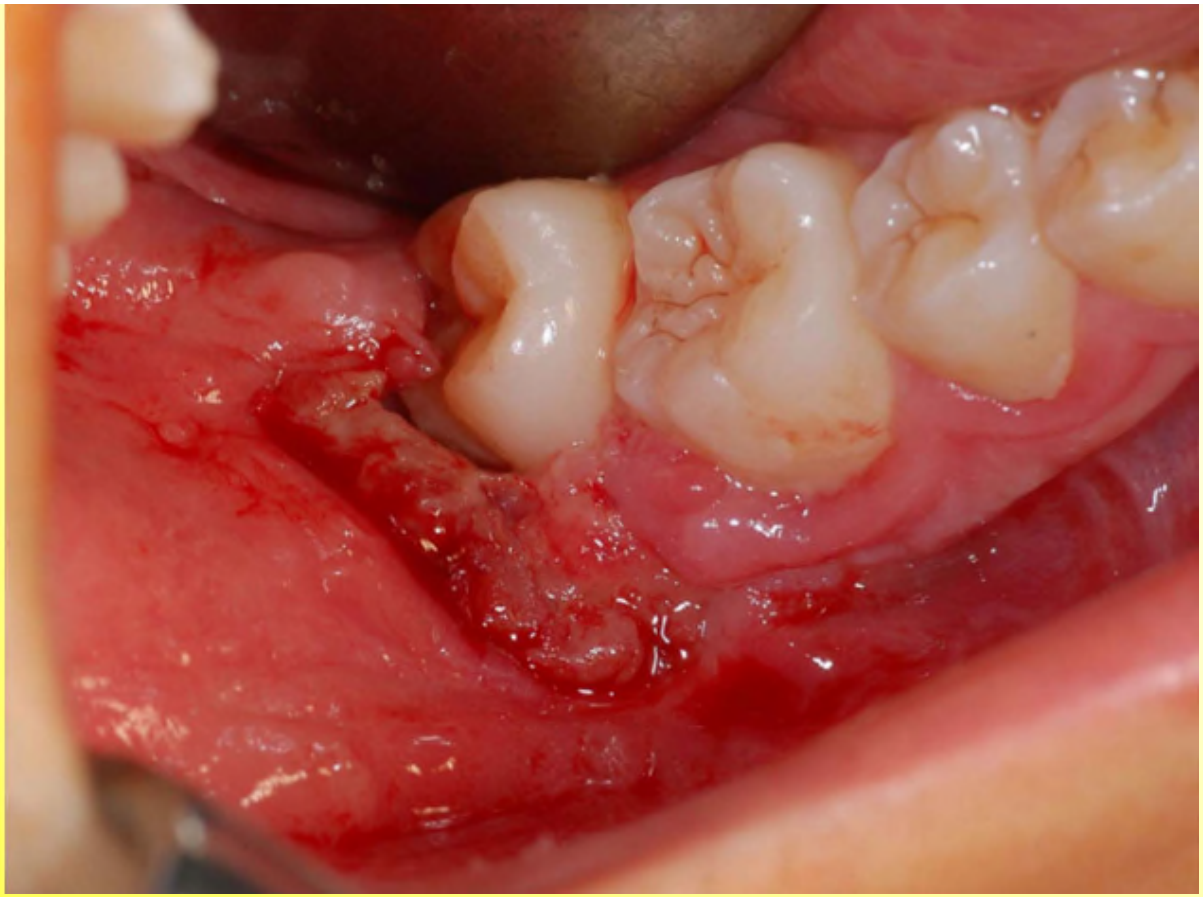
Das unizystische Ameloblastom

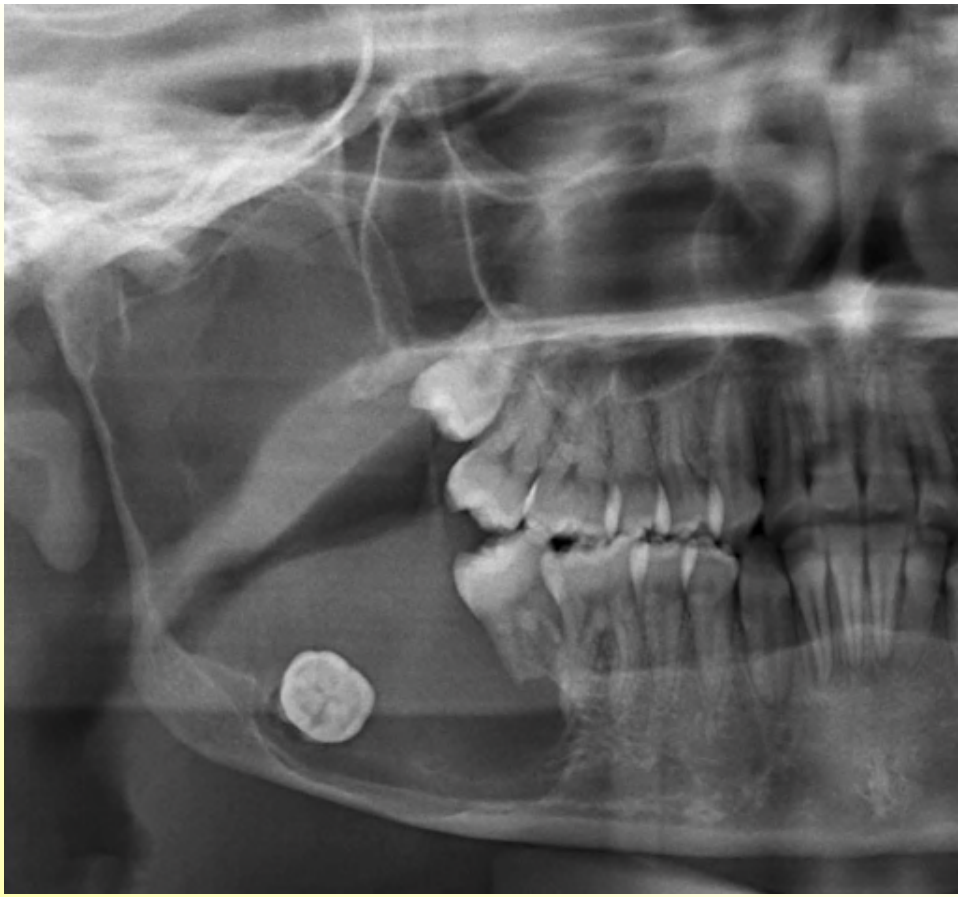
Während konventionelle Ameloblastome nur selten vor dem 20. Lebensjahr vorkommen, werden die unizystische Varianten häufig bereits in der 2. Dekade klinisch manifest. Die Läsionen machen etwa 15 % aller Ameloblastome aus, kommen in 90 % der Fälle im Unterkiefer vor, vor allem in den hinteren Abschnitten, und sind insbesondere bei jüngeren Patienten oft mit verlagerten und impaktierten Molaren (vor allem Weisheitszähne) assoziiert.

Klinisch sind die Tumoren meist asymptomatisch und präsentieren sich als expansive unilokuläre und zum Teil ausgedehnte Osteolysen in der Bildgebung. Sie sind radiologisch damit nicht eindeutig von follikulären Zysten oder odontogenen Keratozysten zu unterscheiden und bedürfen einer histologischen Diagnosesicherung. Mikroskopisch werden 3 Subtypen unterschieden.

Das unizystische Ameloblastom wird üblicherweise erst nach histopathologischer Untersuchung diagnostiziert, da es sowohl klinisch als auch radiologisch als odontogene Zyste erscheint.

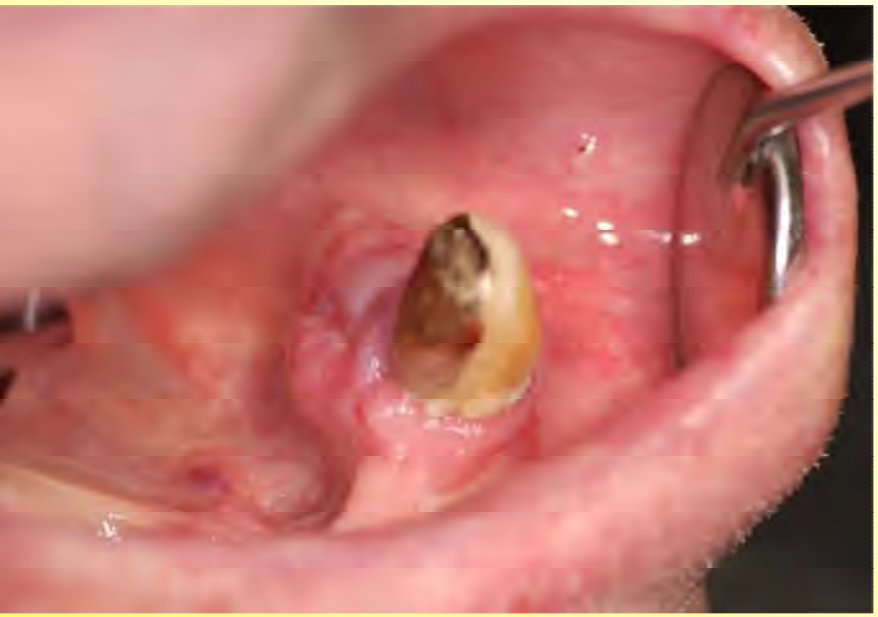
Konventionelle Ameloblastome kennzeichnen sich genetisch durch charakteristische Punktmutationen im MAP(„mitogen-ac- tivated protein“)-Kinase-Signalweg, wobei die ***BRAF*(p.V600E)-Mutation** in etwa zwei Dritteln der Fälle nachgewiesen werden kann. In den verbleibenden Tumoren kommen u. a. Mutationen in den Genen *SMO* (häufiger im Oberkiefer), *FGFR2, KRAS, NRAS* und *HRAS* vor.



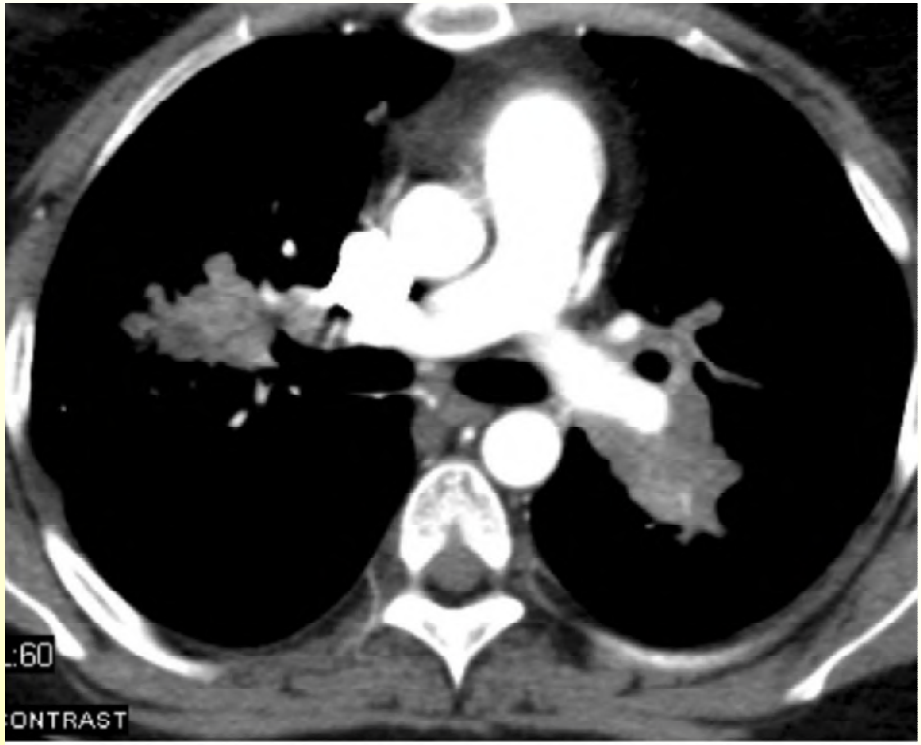


Ameloblastom des rechten posterioren Unterkiefers. Röntgen- aufnahme.

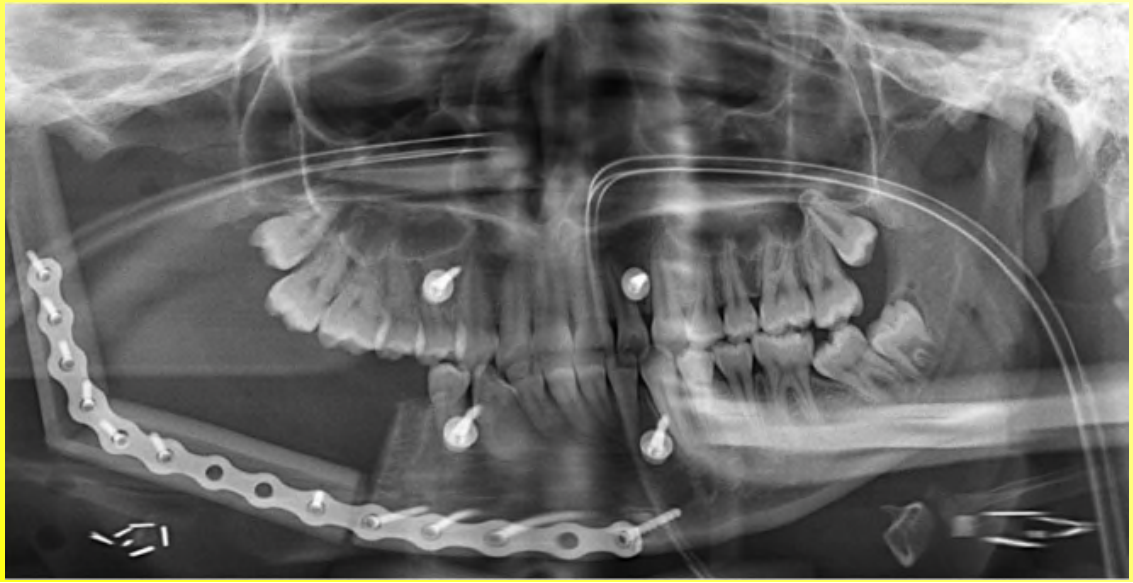
Resektat eines Ameloblastoms der Kieferhöhle nach partieller Maxillektomie.



Peripheres Ameloblastom



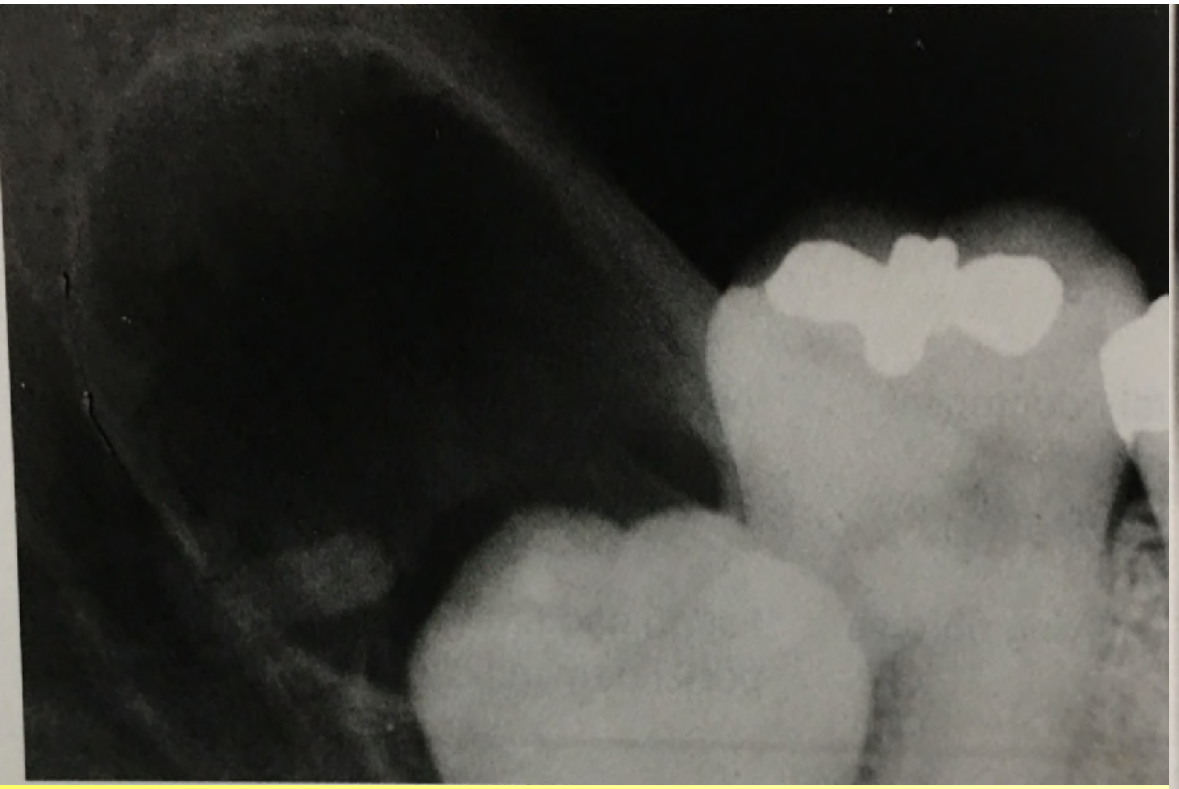
Computertomographie einer Ameloblastommetastase in der Lunge.



Resektion eines Ameloblastoms mit anschließender Rekonstruktion (Fibulatransplantat). Röntgenaufnahme.

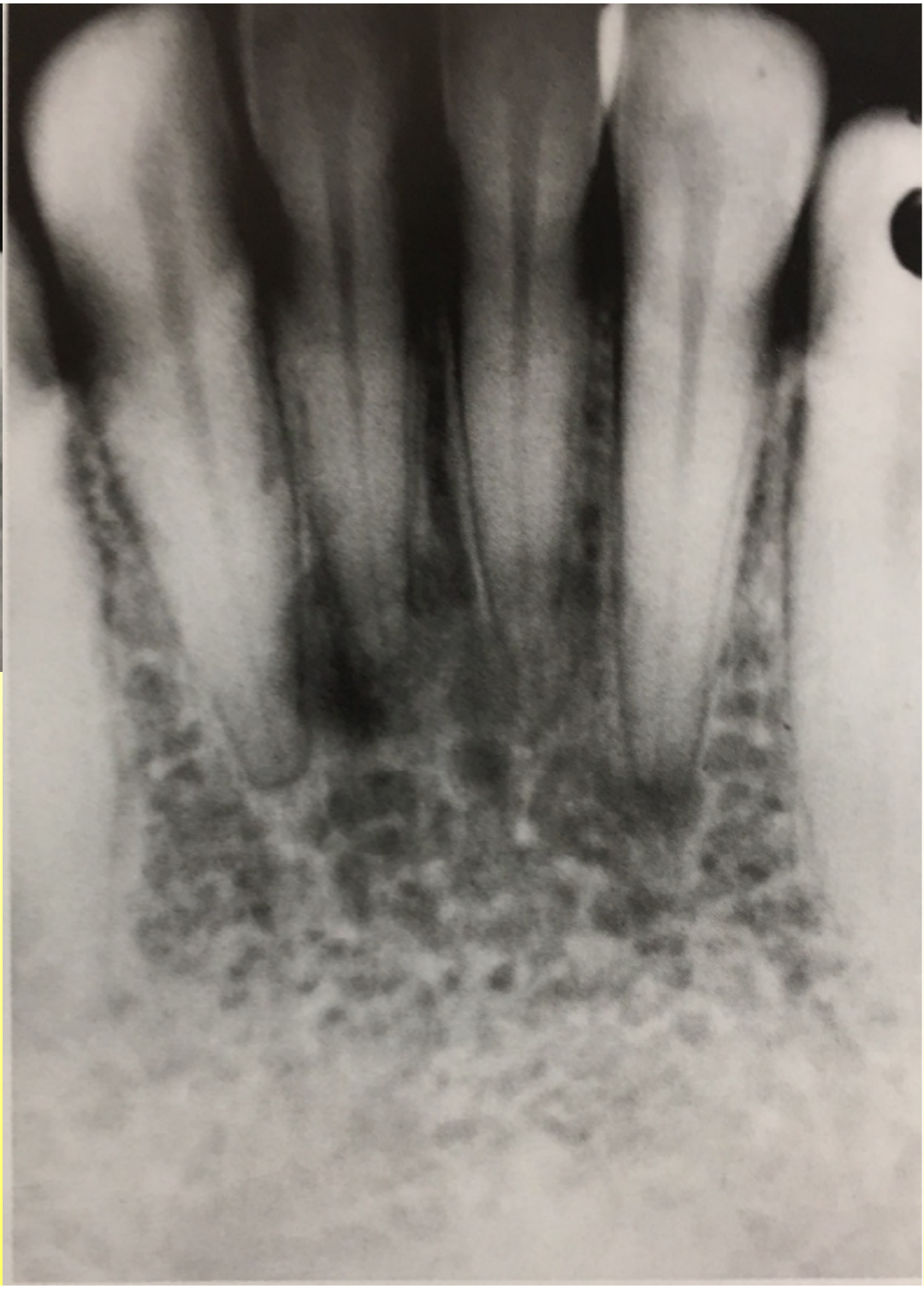
Odontogenic Tumors

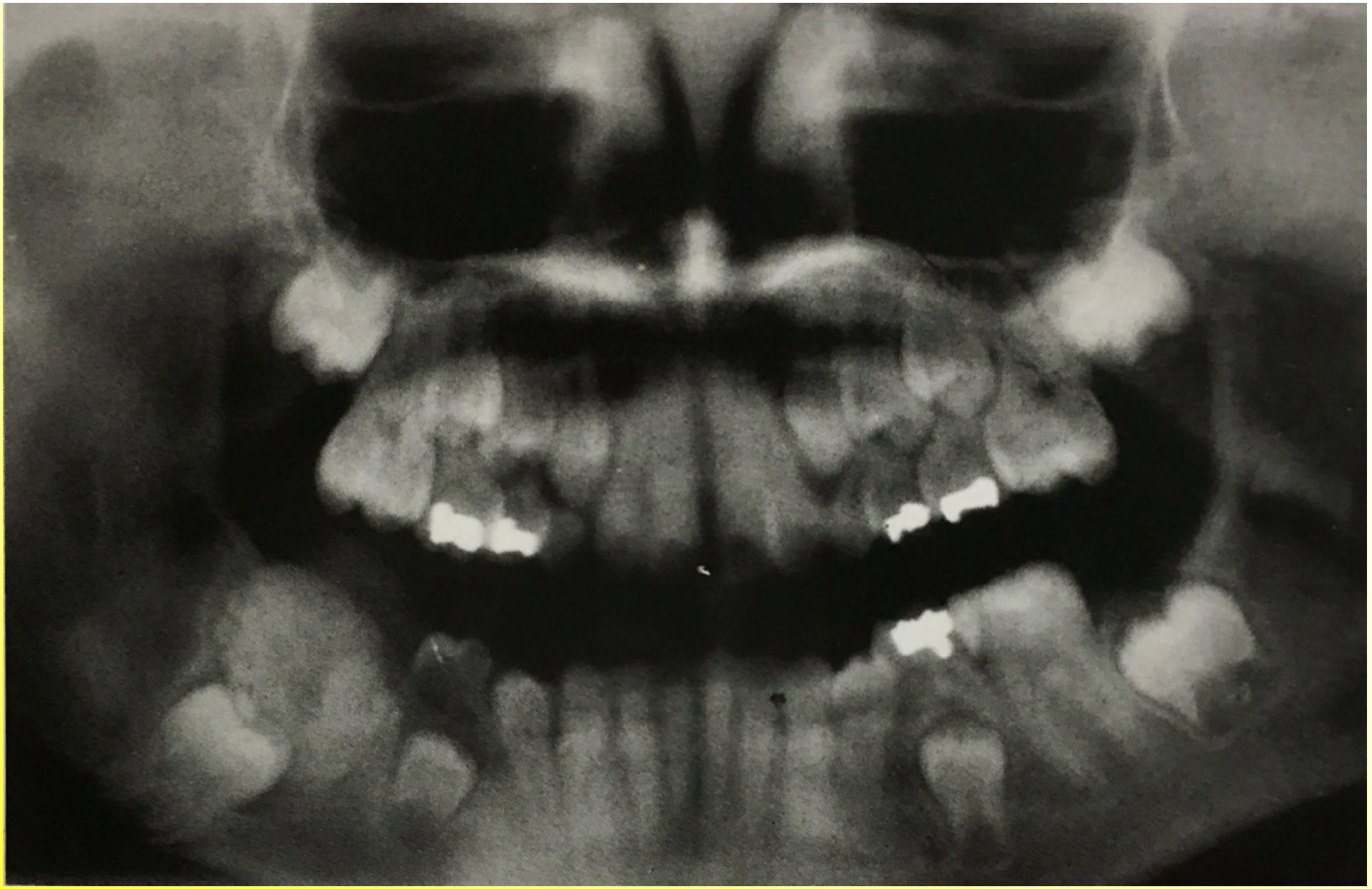
DISEASE	CLINICAL FEATURES	RADIOGRAPHIC APPEARANCE	OTHER FEATURES
Cementoblastoma	Second and third decades; root of posterior teeth; mandible more than maxilla	Opaque lesion; attached to and replaces root; opaque spicules radiate from central area	May cause cortical expansion; tooth and lesion removed together; no symptoms; rare
Periapical cementoosseous dysplasia	Fifth decade; mandible, especially apices of anterior teeth; usually more than one tooth affected	Starts as periapical lucencies that eventually become opaque in months to years	May be a reactive process; always associated with vital teeth; requires no treatment; asymptomatic; common; rare variant known as *florid cementoosseous dysplasia* represents severe form that may affect one to four quadrants and may have complications of chronic osteomyelitis and traumatic bone cysts
Odontoma	Second decade; any location, especially anterior mandible and maxilla	Opaque; *compound type*—tooth shapes apparent; *complex type*—uniform opaque mass	May block eruption of a permanent tooth; *complex type* rarely causes cortical expansion, no recurrence; *compound type* appears as many miniature teeth; *complex type* is conglomeration of enamel and dentin; probably represents hamartoma rather than neoplasm; common
Ameloblastic fibroma and ameloblastic fibroodontoma	First and second decades; mandibular molar-ramus area; often in a dentigerous relationship with tooth	Well-defined lucency; may be multilocular and large; fibroodontoma may have associated opaque mass representing an odontoma	Well encapsulated; recurrence not expected; no symptoms; if odontoma present, lesion is called *ameloblastic fibroodontoma*; rare



Ameloblastisches Fibroodontom

Periapikale zementoossöse Dysplasie

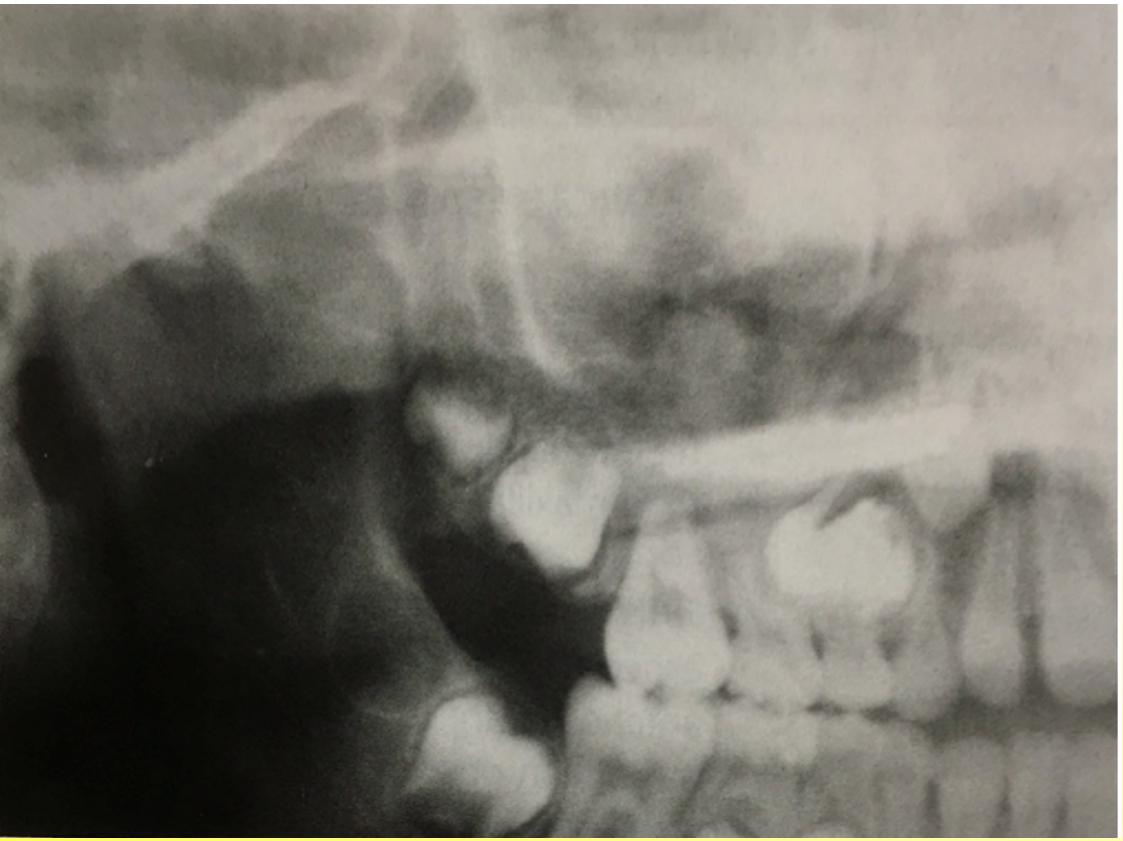




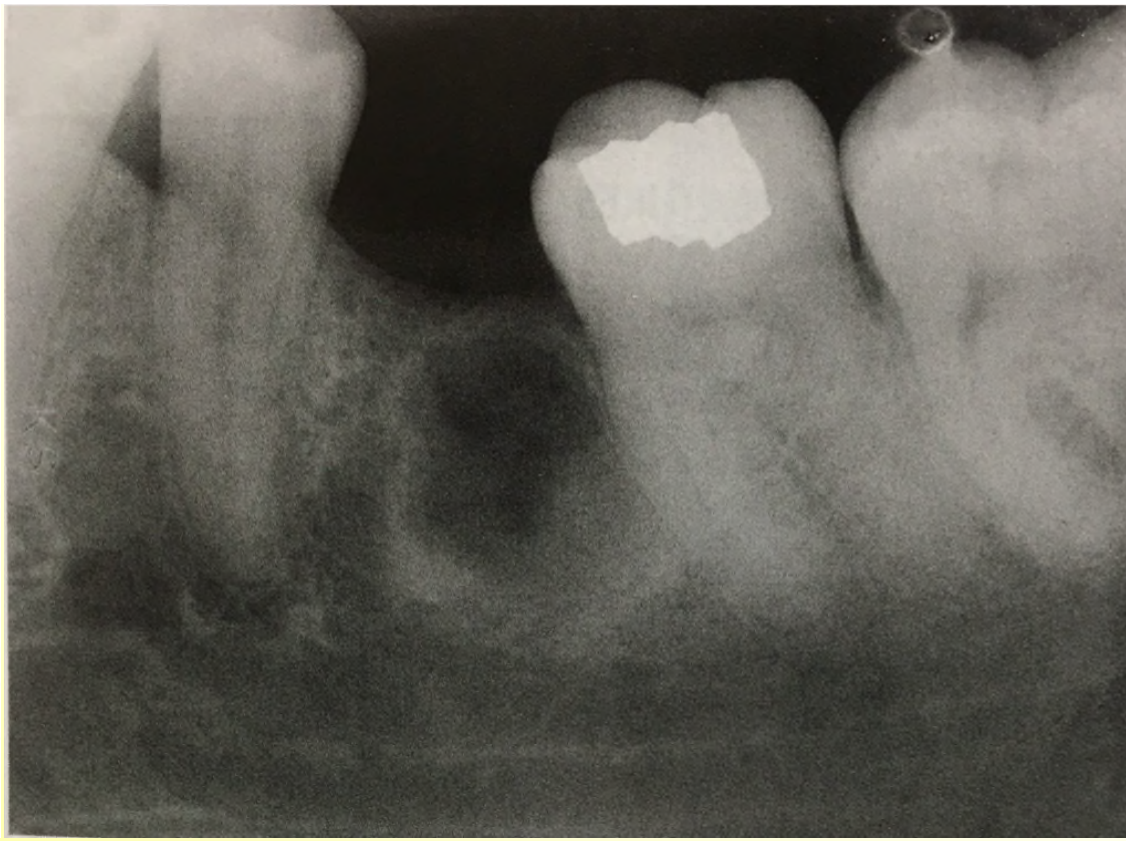
Odontom

Benign Nonodontogenic Tumors

DISEASE	CLINICAL FEATURES	RADIOGRAPHIC APPEARANCE	OTHER FEATURES
Ossifying fibroma	Third and fourth decades; body of mandible favored	Well-defined lucency, may have opaque foci	Slow growing and asymptomatic; may be indistinguishable from cementifying fibroma; does not recur; microscopy often similar to that of fibrous dysplasia; uncommon
Fibrous dysplasia	First and second decades; maxilla favored	Poorly defined radiographic mass; diffuse opacification often described as ground glass	Slow growing and asymptomatic; causes cortical expansion; may cease growing after puberty; cosmetic problem treated by recontouring; Variants: *monostotic*—one bone affected; *polyostotic*—more than one bone affected; *Albright's syndrome*—fibrous dysplasia plus café-au-lait macules and endocrine abnormalities (precocious puberty in females); *Jaffe-Lichtenstein syndrome*—multiple bone lesions of fibrous dysplasia and skin pigmentations
Osteoblastoma	Second decade; either jaw	Well-defined, lucent to opaque lesion	Diagnostic feature of pain; determination by microscopy often difficult; may be confused with osteosarcoma; recurrence not expected; rare
Chondroma	Any age; any location, especially anterior maxilla and posterior mandible	Relative lucency; may have opacities	May be difficult to separate microscopically from well-differentiated chondrosarcoma; rare
Osteoma	Any age; either jaw	Well defined	Asymptomatic; may be part of Gardner's syndrome (osteomas, intestinal polyps, cysts and fibrous lesions of skin, supernumerary teeth); rare

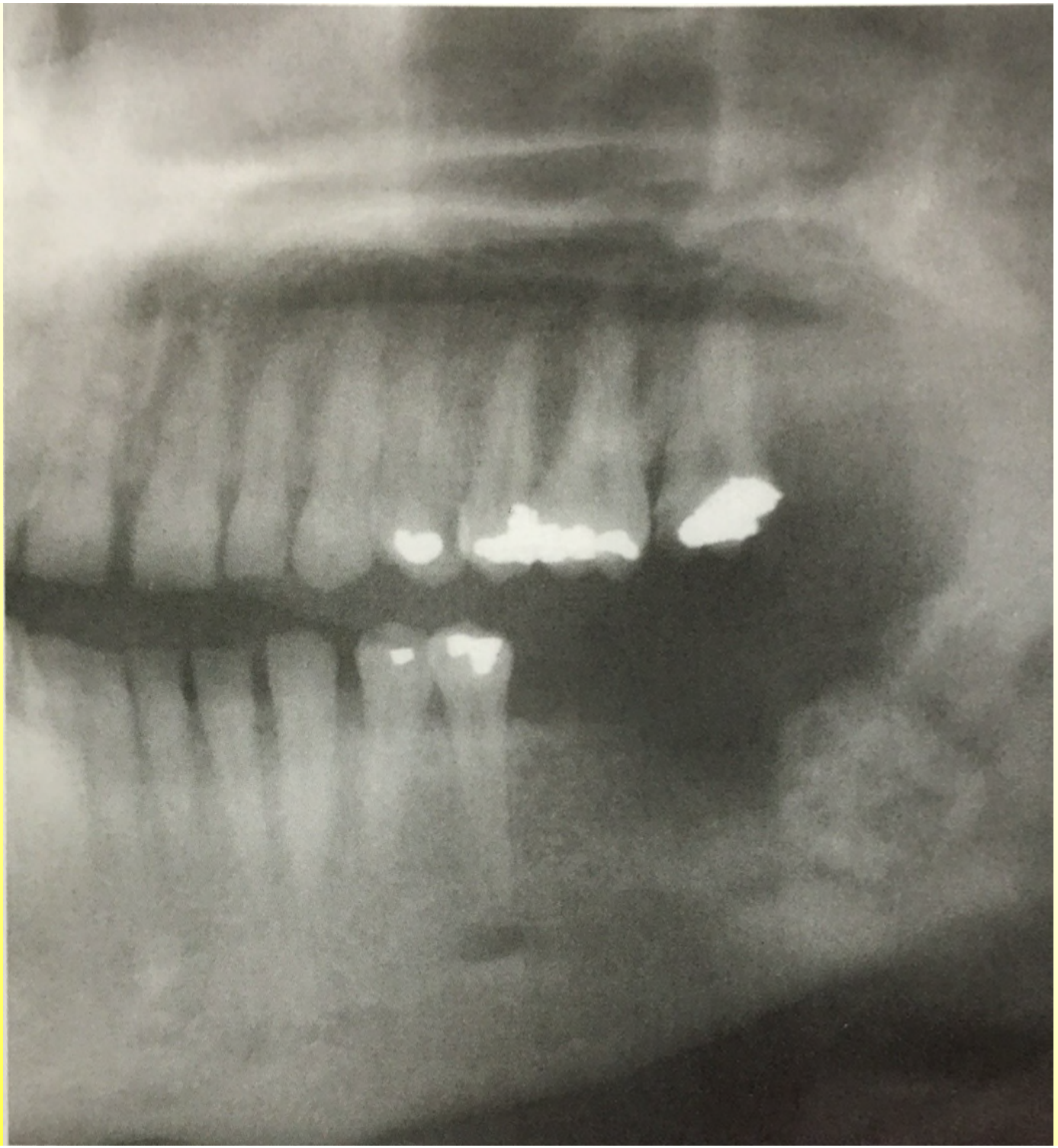


Fibröse Dysplasie



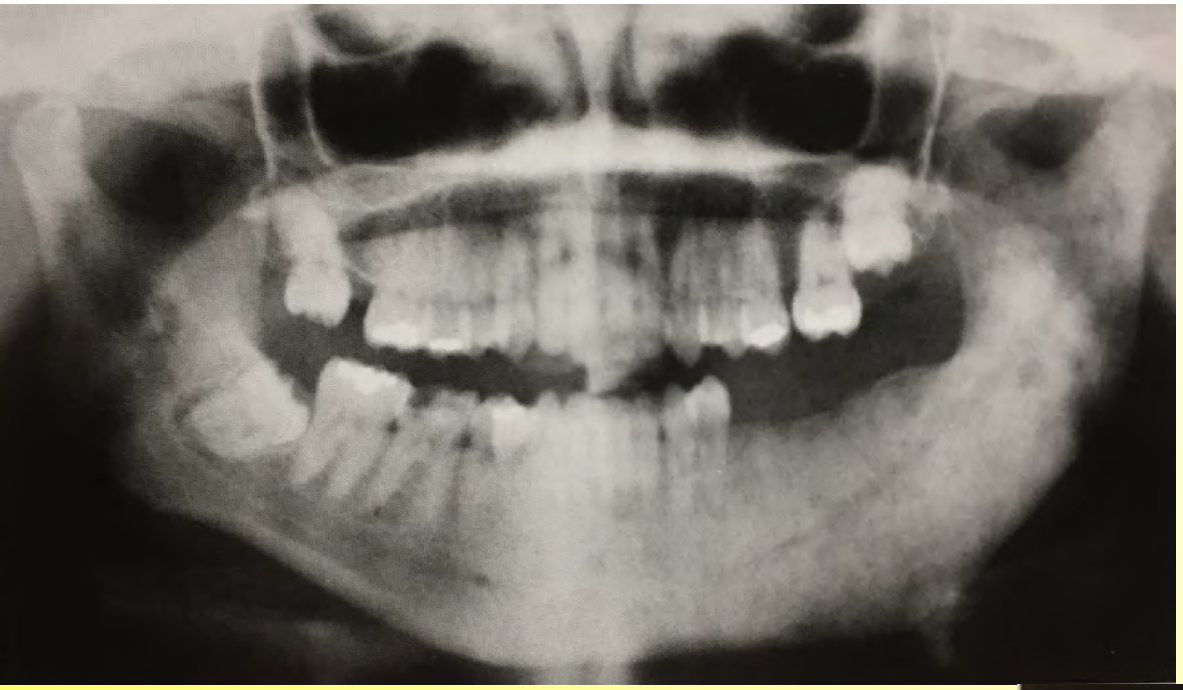
Ossifizierendes Fibrom

Osteoblastom



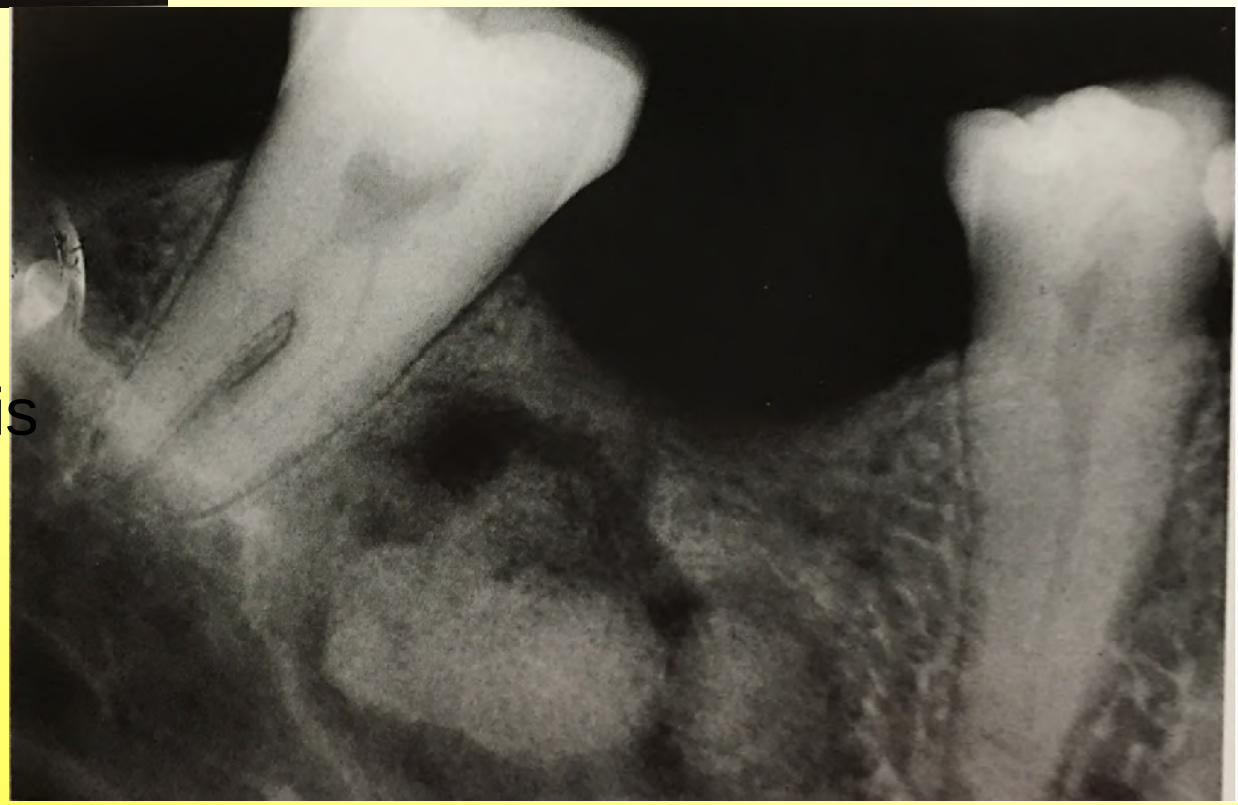
Inflammatory Jaw Lesions

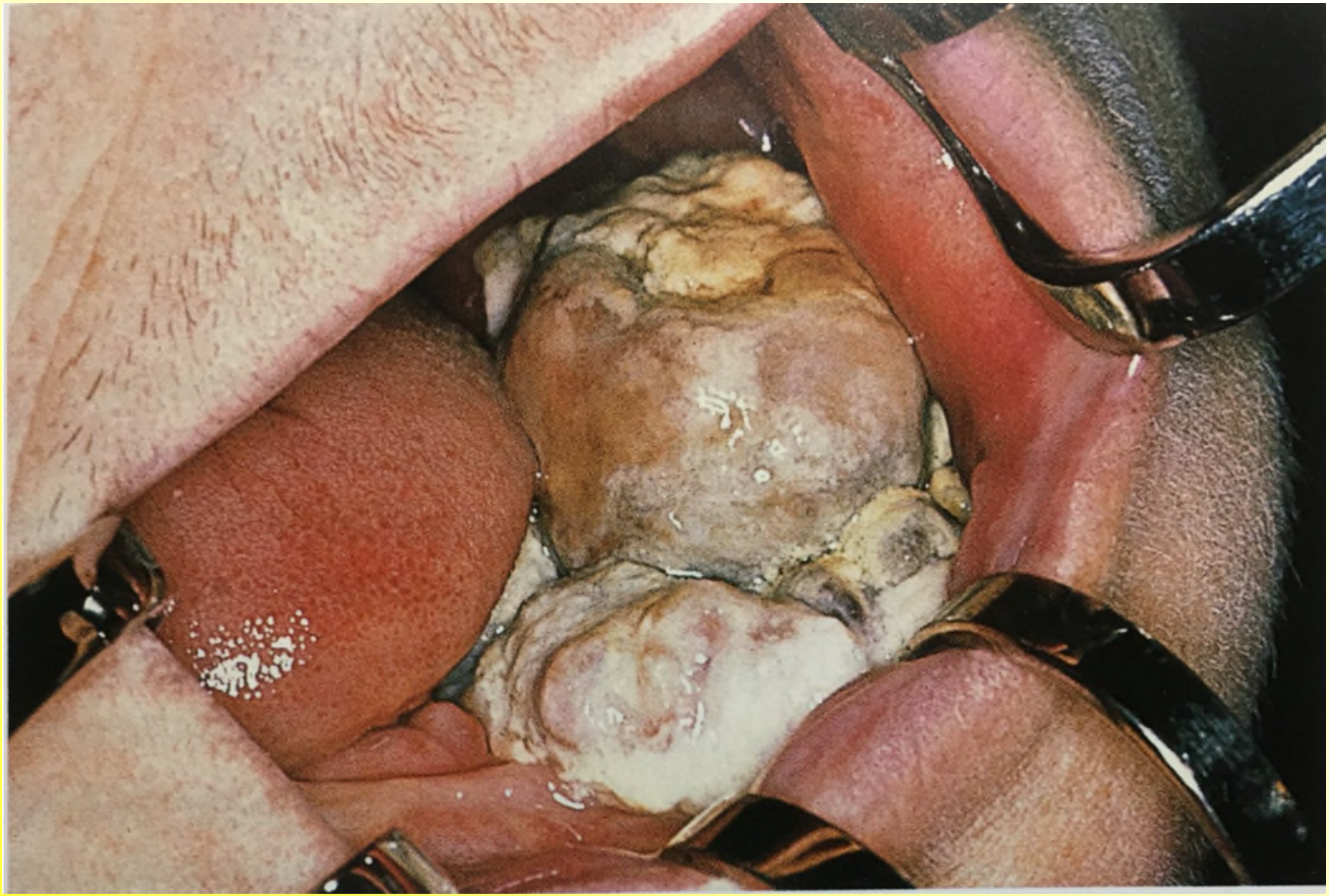
DISEASE	CLINICAL FEATURES	RADIOGRAPHIC APPEARANCE	OTHER FEATURES
Acute osteomyelitis	Any age; mandible favored	Little radiographic change early; after 1–2 weeks, a diffuse lucency appears	Pain or paresthesia may be present; pus producing if due to *Staphylococcus* infection; uncommon in severe form; most frequently caused by extension of periapical infection
Chronic osteomyelitis	Any age; mandible favored	Focal or diffuse; lucent with sclerotic foci described as moth-eaten pattern; *focal sclerotic type*—well-defined opacification; *diffuse sclerotic type*—diffuse opacification; *Garré's type*—onion-skin periosteum	Usually asymptomatic but may be painful; most are related to chronic inflammation in bone of dental origin; many are not treated; nonvital teeth should be extracted or root canals filled; common; *Garré's type* treated by endodontics or extraction of offending tooth



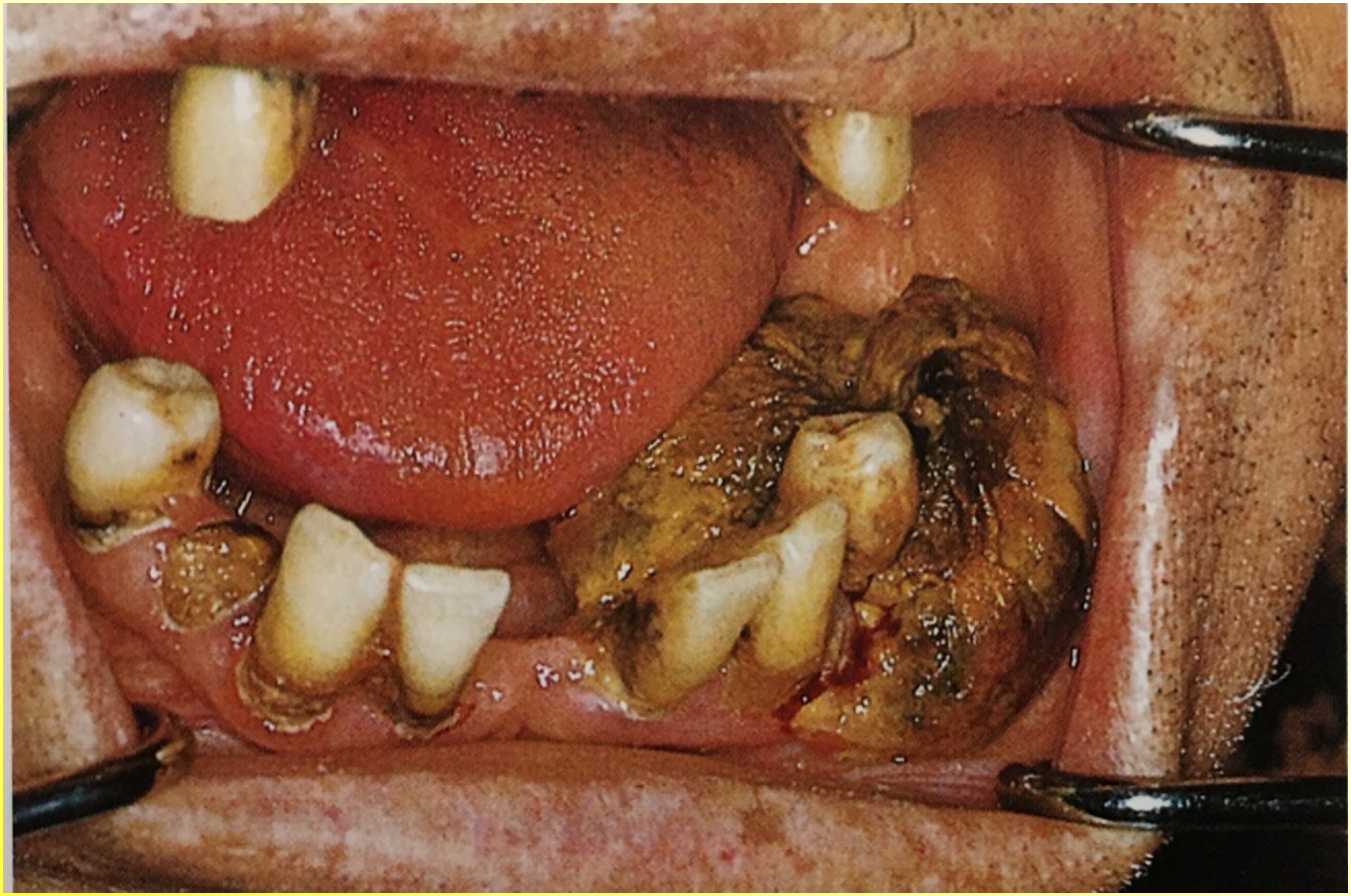
Diffus sklerosierende Osteomyelitis

Fokal sklerosierende Osteomyelitis

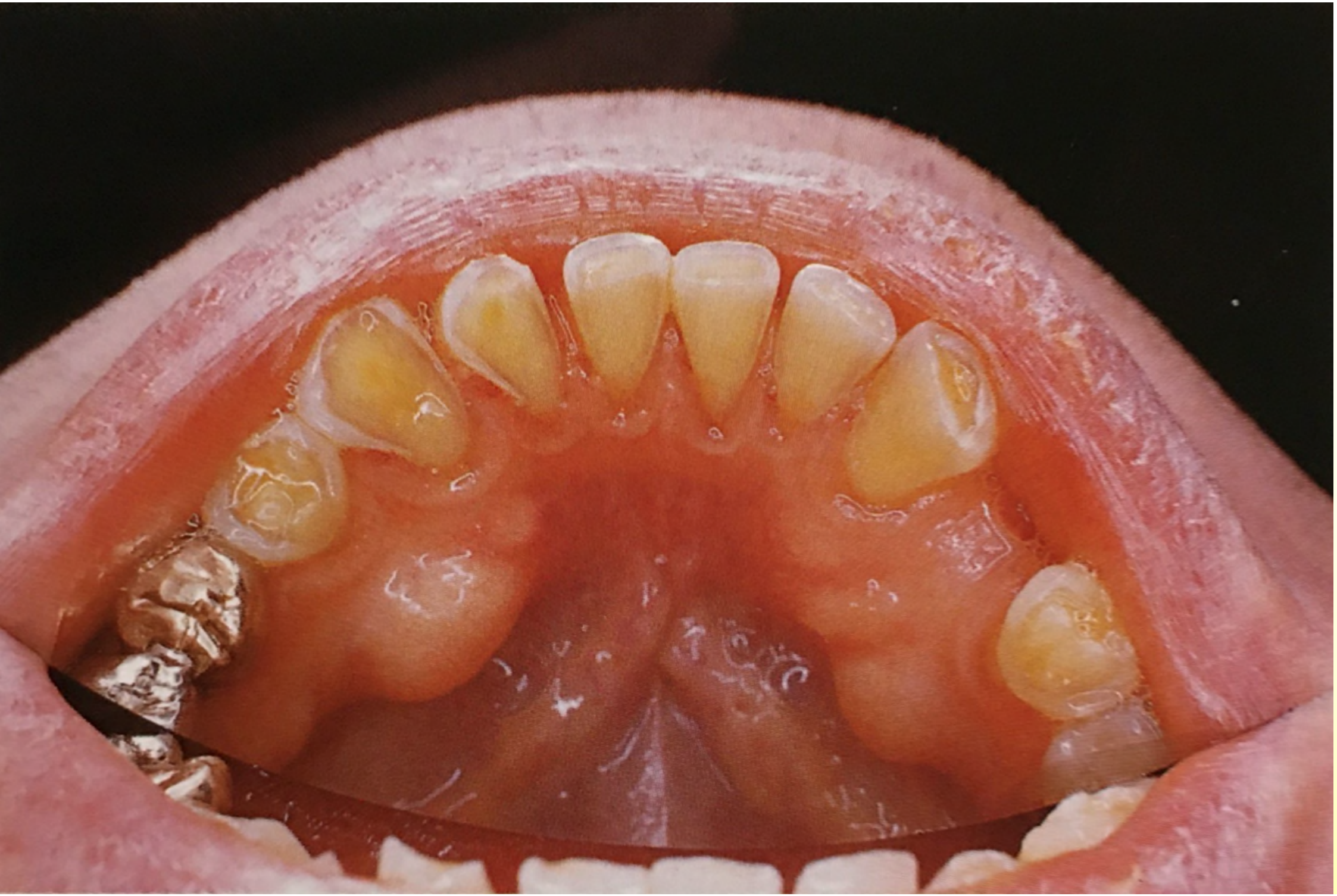




Metastase eines Nierenzellkarzinoms



Metastase eines bronchialen Adenkarzinoms



Vielen Dank für

Ihre

Aufmerksamkeit!

und

ich freue mich auf
Ihre Rückmeldung

Dr. med. Simon Savin